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NEWS SUMMARY

GENERAL

British ship 'sunk in typhoon'

A Liverpool registered bulk carrier with a largely British crew of 42 plus two seamen's wives was believed to have sunk in a typhoon off the coast of Japan.

The 91,000 tons Derbyshire, owned by Bibby Line, is valued at more than £11m, largely insured in the London market. Helicopter searches revealed an oil slick close to her last reported position. She was carrying iron ore from Canada to Japan.

In Saudi Arabia, the official press agency said 89 servicemen were killed when a Saudi Air Force C-130 Hercules transport plane crashed near Medina airport.

BA drops routes

British Airways will drop some routes and sell aircraft to end rising losses caused by a shortage of traffic. But there will be no compulsory redundancies. Back Page.

Loan for Poland

Polish free trade union activists gather in Gdansk today to discuss a national co-ordinating committee. The Soviet Union has agreed to defer payment on a $280m loan and provide a new low interest 10-year loan worth $260m. Back Page; background, Page 2.

Kampuchea offer

Chinese Prime Minister Zhao Ziyang said China would agree to an international peace conference on Kampuchea, but Vietnam must first withdraw some of its troops.

Trudeau warned

Canada's federal Prime Minister Pierre Trudeau was warned by eight of the 10 provincial premiers that they would oppose his Government's unilateral moves towards constitutional reform. Page 3

Language protest

Five Welsh language demonstrators who ransacked the Carlisle constituency offices of Home Secretary William Whitelaw were conditionally discharged for a year after admitting causing criminal damage to documents.

Storey jailed

Former England and Arsenal football star Peter Storey was jailed for three years after admitting conspiring to counterfeit gold half sovereigns.

Smallpox verdict

Inquest jury at Solihull returned verdicts of death by misadventure on Mrs. Janet Parker, 40, and her father Mr. Fred Whitcomb, 71, who died after an outbreak of smallpox in Birmingham two years ago.

Yootha's secret

Actress Yootha Joyce, star of television's George and Mildred, secretly drank upwards of half a bottle of brandy a day for at least 10 years and died a chronic alcoholic, her solicitor told an inquest yesterday.

Name the charity

John Smith piloted a Jumbo jet carrying more than 400 Smiths over Smith's Water Hole in Northern Australia to raise money for a charity called The Smith Family.

Briefly ...

Prince Charles became a member of the International Brotherhood of Scientist-Divers.

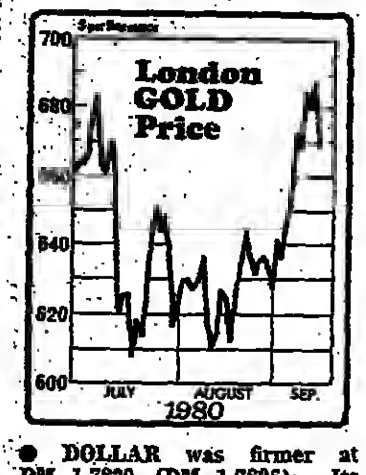
Israeli Labour Party leader Shimon Peres, was taken to hospital for treatment for severe chest and abdominal pains.

Mild weather is expected in most of the UK in the month to mid-October. Long range forecast, Back Page

BUSINESS

Gold off $18; Dollar firmer

● GOLD lost $18 in London, closing at $669.5. Selling developed soon after New York opened. Page 21



● DOLLAR was firmer at DM 1.7830 (DM 1.7805): Its trade-weighted index rose to 83.4 (83.2). Page 21

● STERLING closed 1.75 cents down at $2.3970. Its index fell to 75.6 (76.2). Page 21

● EQUITIES closed 8.2 down at 500.7, with Electricals' losses ranging to 17p. Page 28

● GILTS eased 0.08 to close at 70.76. Page 28

● WALL STREET was 2.22 down at 934.30 near the close. Page 23

● FRANCE has asked Britain for a £50m entrance fee to the European Superphenix fast-breeder nuclear reactor project. Back Page

● NUCLEAR INDUSTRY Group has been set up to direct the project for the first British pressurised water reactor. Page 6

● IRAN'S dissatisfaction with proposals for a long term oil pricing and production policy could jeopardise an OPEC compromise. Back Page

● CUSTOMS investigation staff are being increased to counter the illegal importing of textiles. Page 5

● THREAT OF LEGAL action has set back plans to merge the AUEW's four sections. Page 10

● UNITED GLASS is making a further 582 process workers redundant and closing its Brimsdown, Enfield, factory.

● WHITEFRIARS GLASS, maker of cut glass tableware for 300 years, has closed.

● FIAT of Italy and Peugeot of France are to jointly produce a new engine. Back Page

● MALAYSIAN politician and businessman Ghafar Baba is one of the recent buyers of Dunlop Holdings shares. Page 19

● ITT (UK) and ASEA, the Swedish electrical company, have reduced their direct investment in South Africa. Page 25

● GENERAL ELECTRIC is to buy Californian integrated circuits maker Intersil for about $235m (£98m). Page 24

● MULTINATIONAL companies have been urged to come out "loud and clear" in favour of the international accounting standards committee. FT seminar report, Page 8

● SIMON ENGINEERING lifted first half taxable profits from £7.25m to £7.62m, helped by the performance of its overseas companies. Page 20; Lex

● LINK HOUSE Publications' pre-tax profits rose 38.7 per cent to £4.2m (£3.03m) in the year to June 30. The total dividend is 8.4p net, 20 per cent more than forecast. Page 18

● RICHARDS and Wallington, plant hirer, reports first half pre-tax profits down to £439,000 from £1.18m, after a £700,000 increase in interest charges to £2.34m. Page 18

CHIEF PRICE CHANGES YESTERDAY

(Prices in pence unless otherwise indicated)

RISES			
Excheq. 13¼pc '87 £103¾		+	½
Baird (W.)	172	+	8
Finlay Packaging	28	+	9
Hepworth (J.)	93	+	11
Kwik-Fit	96	+	4½
Lep Group	325	+	10
Link House	193	+	8
Lonrho	109	+	5
Mountleigh	94	+	8
N. Goldsmiths	82	+	12
Portals	412	+	10
Rush & Tompkins	240	+	10
Simon Eng	277	+	11
Smith Whitworth	12	+	3
Stylo	145	+	10
Tern-Consulate	30	+	6
Willis Faber	233	+	7
Attock	246	+	10
Santos	685	+	45
Haoma Gold	166	+	14
Impala Platinum	477	+	27
MIM Hlds.	289	+	33
Metals Exploration	84	+	8
UC Invs.	670	+	50
Western Mining	298	+	11
FALLS			
Excheq. 12pc '98 £95⅛		−	⅜
Borthwick (T.)	32	−	3
Cornell Dresses	70	−	16
GEC	520	−	17
GKN	218	−	6
Hawker Siddeley	228	−	6
ICL	181	−	10
Land Securities	390	−	7
Lloyds Bank	338	−	10
Plessey	255	−	10
Racal Electronics	330	−	11
Rowntree Mack.	166	−	6
Thorn EMI	344	−	16
UDS	66	−	3
Otter Exploration	74	−	10

Union calls dock workers on strike from next week

BY PAULINE CLARK, LABOUR STAFF

THE TRANSPORT and General Workers Union yesterday gave its full backing to a national docks strike which is to start from midnight next Sunday — the first national action by Britain's 23,000 dockers since 1972.

The strike, over redundancies in Liverpool, would affect registered and non-registered ports throughout the country. Union leaders believe it could halt export and import trade within 24 hours, confronting the Government with what could be its most serious labour dispute since it came to office.

The TGWU will this week seek support from other unions involved in dock work, such as the National Union of Railwaymen and the General and Municipal Workers Union. It is also planning to call on Continental union leaders for backing.

The union's executive took its decision in just over an hour yesterday following a unanimous cal for action from an 80-strong delegate conference of dockers in the morning.

The conference had been called to discuss the position of 180 Liverpool dockers who are threatened with redundancy at the end of this month and who have been warned that they may be placed on the Temporary Unattached Register. The Liverpool employers, who claim they cannot afford the increasing financial burden of surplus dock labour, view the register as a cheap way of getting rid of dockers

Until now, however, the register has been used only to place dockers awaiting disciplinary hearings. Normally, surplus dockers are kept on the employers' books on £78.50 a week instead of £55 which is the rate on the register.

Throughout the talks with employers which preceded yesterday's decision, dockers leaders emphasised their fears that any move to place the men on the register could have widespread repercussions throughout Britain's ports where the recession is making it increasing difficult to keep dockers employed.

Mr. Alex Kitson, deputy general secretary of the TGWU, made it clear yesterday that the dispute over the register represented a straight fight with British port employers aimed at preserving dockers' jobs.

He said the union had "no option" but to call the strike following the Liverpool employers' threat not to honour the agreement in 1974 between Mr. Jack Jones, former general secretary of the TGWU, and Lord Aldington, then chairman of the port employers, which precluded use of the register except to place dockers awaiting disciplinary hearings. The agreement was struck in the wake of the 1972 strike.

Mr. Kitson said this was the first time since 1974 that any employers had threatened to use the register instead of reallocating redundant dockers to other port employers.

He added that there was still time for the employers to avoid the strike. The union's door was open for talks with anybody including the employers, the Government or the port authorities.

Mr. Kitson said the union did not want to discuss severence pay but was concerned with saving

The National Port Employers' Association is expected to discuss tomorrow plans to raise dockers' severence pay from £8,500 to £10,000 — a move which the Liverpool employers hope will increase voluntary redundancies, reduce their financial burdens and lead to a way out of the present dispute.

Air and ferries offer little relief, Page 9

Fears for offshore oil industry

BY HAZEL DUFFY, INDUSTRIAL CORRESPONDENT

INDUSTRY will be hit if the national docks strike goes ahead —but the overall worry is that it will create one more headache for management, when many are near exasperation trying to cope with the effects of worldwide recession and the particular problems being encountered by British industry.

In other sections of industry, reaction ranges from concern over the transport of essential supplies to fear of another irritant in the battle to maintain British industry' competitiveness.

ICI, the country's second biggest exporter, pointed yesterday to the already-difficult situation in the chemicals industry, caused by plentiful supplies and very keen pricing. A spokesman said: "I can't imagine anything worse for the industry, already in a state of recession, than an extended docks strike."

Multinational companies which rely on the UK for the production of certain components could beh adly hit.

Ford, for example, expressed concern about the possible effects on the shipment of engines from its new plant at Bridgend, South Wales.

Theh Bridgend output is to be sent to West Germany, where it will be built into the new Escort car to be launched in Europe on September 26.

The most serious problems could occur in the offshore oil and gas industry, which hardly existed at the time of the last national docks strike in 1972.

The industry warned last night that the development of new fields and major maintenance schemes could be affected almost immediately because of the difficulties of transporting vital equipment—most of it made in the UK—from shore to the North Sea fields.

If the strike is prolonged essential supplies of food and fuel to the rigs and platforms might be held up. Production from oil fields would be affected, with damaging effects on the balance of payments.

For those parts of industry working well below capacity, however, the strike might have little effect in the early stages. Steel stocks, for example, are more than adequate in most parts of the country. The British Steel Corporation said yesterday that it had good stocks of iron-ore and coal.

Another area where there appears to be little cause for alarm is foodstocks. Supplies of fresh fruit and vegetables are adequate for the immediate future. This year's good barley harvest means there should be relatively few worries about supplies of animal feed.

The food manufacturing industry, however, said the key element was avoiding panic buying.

UK Rothschilds in bitter row over use of family name

BY RICHARD LAMBERT

A BITTER public dispute has broken out between two branches of the UK Rothschild family concerning the use of the family name.

The board of Rothschilds Continuation, the holding company for N. M. Rothschild and Sons, the merchant bank, has said Mr. Jacob Rothschild should cease to be on the boards of both companies in the near future. In that event Rothschild Investment Trust, the publicly quoted company of which Mr. Jacob Rothschild is chairman, could be forced to change its name to one that did not include the word "Rothschild."

Mr. Evelyn de Rothschild, 49, who is chairman of the bank and the biggest single shareholding in the holding company, said yesterday that the decision was the result of six or eight months of growing uncertainty about the use of the name Rothschild. "People have become confused about who is acting for what."

Rothschild Investment Trust has over the past few years become an increasingly powerful force in the financial markets. Last year, a fifth of its equity was bought by Reliance, the U.S. insurance group.

The investment trust's articles of association give the merchant bank the power to require "Rothschild" to be dropped from its name if there were no longer common directors.

Mr. Jacob Rothschild, who is 44 and Mr. Evelyn de Rothschild's cousin, told yesterday's annual meeting of Rothschild Investment Trust that the company had offered to change its name to J. Rothschild Investment Trust.

"Your board and I were deeply concerned by the response of Rothschilds Continuation to our offer," he said.

Rothschild Investment Trust had been told that it would not have to change its name provided that neither it, nor its associates, nor Mr. Jacob Rothschild himself, carried on additional or recognised banking businesses under any name anywhere in the world. In addition, the use of the Rothschild name would be restricted to the holding company only.

"You will readily appreciate that for Rothschild Investment Trust to submit to such restrictions would be unreasonable and not in its best interests," Mr. Jacob Rothschild said.

It was "a matter of deep personal regret that differences within a family should involve you, the shareholders of Rothschild Investment Trust, but I have received legal advice that I must set out the position clearly and openly at this meeting."

He would resign from the merchant bank board as from yesterday, but he intended to stay a director of Rothschilds Continuation until the investment trust's shares in Continuation had been sold, and the question of Rothschild Investment Trust's name had been clarified.

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For latest Share Index 'phone 01-246 8026

£ stabilises after 1.75c fall

BY PETER RIDDELL, ECONOMICS CORRESPONDENT

Sterling fell sharply yesterday against all other major currencies, although it quickly stabilised at lower levels.

At one stage in the morning the pound dropped by over 2¼ cents against the dollar, but it later recovered to close 1¾ cents down at $2.3970. Sterling also fell from its recent heights against the main continental currencies — closing at DM 4.27½ against DM 4.30 on Friday.

Consequently, the trade-weighted index, measuring the average value of sterling against other currencies, dropped by 0.6 points to 75.6.

The fall in sterling was attributed to a combination of factors, including the possibility of a national dock strike in Britain, speculation about a fall in Minimum Lending Rate and the rise in the dollar.

The dollar strengthened against most other major currencies, partly in response to hopes of a favourable outcome to the OPEC talks and partly following a further rise in U.S. interest rates.

The gap between UK and U.S. interest rates is now clearly narrowing, especially following the sharp drop in London money market rates in the last two weeks.

A cut in Minimum Lending Rate does not, however, appear to be imminent. Treasury ministers share the general view that the trend in interest rates is downwards but they want both to wait at least until the September banking figures are available early next month and to see what happens to money market rates.

This caution was reflected yesterday in the gilt-edged market where the recent strong rise in prices ended. Prices of long-dated stock, initially up to £¼ higher, fell to close around opening levels and, in some cases, slightly down on the day.

Currencies, Page 21

£ in New York

—	Sept. 12	previous
Spot	$2.4075-4100	$2.4180-4190
1 month	1.11-1.06 dis	1.13-1.08 dis.
3 months	2.54-2.29 dis	2.48-2.43 dis.
12 months	4.10-3.95 dis	4.40-4.20 dis.

Manufacturing output is below worst 1975 level

BY PETER RIDDELL, ECONOMICS CORRESPONDENT

MANUFACTURING OUTPUT is falling faster than expected and is already lower than at the worst stage of the 1975 recession.

Central Statistical Office figures published yesterday show that the recession is deepening, and is spreading out across most sectors of industry.

Following a sharp drop in orders in the late spring, industrial output fell 1.9 per cent between May and July compared with the previous three months. In July the all-industries index was 106.4 (1975 = 100), compared with an average of 112.6 in 1979.

There are indications that there will be a further fall in production during the autumn. The most recent trends survey by the Confederation of British Industry indicates a weak level of output in the next four months.

Reports from the regions in the last fortnight suggest that a new round of cuts in orders, below the low levels of the summer, may be starting. Many companies appear to have reviewed their outlook after the summer holiday period and a common conclusion appears to be that further cuts are necessary in view of continuing excessive levels of stocks.

The decline in output so far has already been larger than expected, especially in manufacturing where production in the first seven months of this year was 5.3 per cent lower than the average for 1979. This compares with a Treasury forecast in March that manufacturing output for 1980 as a whole would be 4.5 per cent less than last year.

On present indications estimates by the CBI and others that the fall over 1980 will be between 6½ and 7 per cent look more realistic.

Nevertheless, activity in other areas of the economy — notably services and the public sector — has been stronger than expected. Consequently, the drop in total output this year, as measured by real Gross Domestic Product, may not be much larger than the 2½ per cent fall forecast by the Treasury in March.

Manufacturing output has declined across the board. For example, the output of the textiles, clothing and leather sector in the first seven months of this year was 11 per cent below the 1979 average. On the same basis the output of the chemicals, coal and petroleum products sector, previously a strong performer, was 5.5 per cent down.

Overall, industrial output was 4 per cent down on the same comparison, although rising North Sea oil and gas production partially offset the fall in manufacturing.

The general weakening of demand in the economy was further highlighted yesterday by Department of Trade figures which show that that volume of retail sales between June and August was 1 per cent less than in the previous three months. During the first eight months of this year the average level of trade was roughly one half per cent less than the average for 1979.

The provisional estimate suggests, however, volume of sales recovered slightly last month from the very low level of July. The seasonally adjusted index was 100½ (1976=100) compared with 99.0 the previous month, though it was still much lower than earlier this year.

The Department of Trade suggests that the pick-up in August and the rather uneven pattern of trade in recent months may be the result of retailers extending special offers which have changed the normal seasonal pattern of

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ECONOMIC ACTIVITY

		Industrial output 1975=100	Manufacturing output 1975=100	Retail sales volume 1976=100
1979	1st	110.4	102.5	100.4
	2nd	114.8	107.0	106.0
	3rd	112.6	103.1	99.0
	4th	112.4	103.8	101.0
1980	1st	110.4	100.6	102.4
	2nd	106.6	97.1	100.6
	June	107.1	97.2	100.7
	July	106.4	96.7	99.0
	August	—	—	100.5*

* Provisional
All figures seasonally adjusted
Sources: Central Statistical Office and Department of Trade

W. GERMAN CURRENT ACCOUNT

Bundesbank head adds DM5bn to deficit forecast

BY KEVIN DONE IN FRANKFURT

THE BUNDESBANK, West Germany's Central Bank, has become more pessimistic since July about the likely size of the deficit on this year's current account. Herr Karl Otto Pöhl, president of the bank, said yesterday that the deficit could be "nearer DM 30bn" (£6.977bn) than the previously DM 25bn.

The Bundesbank has already had to correct its current account forecasts once before this year in July, when it admitted that the total deficit could top the DM 25bn mark against earlier forecasts of DM 20bn.

The current account plunged into a deficit of DM 10bn last year for the first time since 1965, but in 1980 it has had to take the full impact of the dramatic series of oil price increases over the last 18 months.

In July the fall into deficit was accelerated, particularly by seasonal factors, which resulted in a monthly deficit of DM 5.2bn, compared with only DM 2bn in the corresponding month last year.

Herr Pohl is confident, however, that the size of the deficit will be considerably reduced next year. Without the oil price increases the current account would have been about in balance this year, he said.

With the slowing down of the domestic economy more resources would be released for exports, he said. At the same time the rate of growth in imports would be slowed down.

The West German economy should still reach the forecast growth of 2.5 per cent this year, although it had virtually stagnated in July. After the surprisingly strong start in the first quarter, when the West German gross domestic product expanded by fully 5.8 per cent, growth in the second quarter was down to 1.5 per cent.

The very high deficit on the current account has seriously limited the Bundesbank's room for manoeuvre in relaxing its tigh monetary policy. Growth in the money supply in recent weeks has even been below the Central Bank's own aim of a growth of between 5 per cent and 8 per cent in the Central Bank money stock from the fourth quarter of 1979 to the fourth quarter of 1980.

But the Central Bank has had to resist mounting pressure, chiefly from the trades union movement, for a significant easing of the monetary reins because of the need to finance the current account deficit through the markets.

As a result it has been unable to reduce its key interest rates, the discount and Lombard rate, which are standing at a post-war record level, because its main priority is to maintain the Deutsche Mark as an attractive currency for foreign investors.

The Bundesbank central council meets on Thursday to review its monetary policy, but the financial markets here are expecting no important changes of direction to be announced.

Leslie Colitt reports from the dilapidated Gdansk hotel at the hub of Poland's new unionism

Squalor and hope at the Hotel Morski

THE HOTEL MORSKI has become to Gdansk what the Smolny Institute was to revolutionary Petrograd although under somewhat different auspices.

In November 1917 a brilliant intellectual, by the name of Vladimir Lenin, presided over the Congress of Workers and Soldiers' Deputies. Sixty three years later, in a tiny office on the fourth floor of the run-down Hotel Morski the worker, Lech Walensa, is attempting to give a voice to the long silent *common man in* Poland.

When delegates arrive in Gdansk tomorrow, from factories, offices and institutions throughout Poland they will have trouble finding a room in the dilapidated hotel large enough to hold the organising Congress of the first independent trade union in the Communist world.

Throughout the day a stream of shabbily dressed people file into the former seamen's hotel which since September 8 has housed the Independent and Self Governing Trade Union. They mill in the corridor of the fourth floor seeking advice and help.

Some were sacked in the past for political reasons and are unable to support their families. Wives and husbands come in the hope of obtaining the Polish dream, a self-contained flat for their families after years of waiting.

Anna Walentynowicz, the woman worker who was fired from the Lenin shipyard and whose reinstatement was the first demand of the striking workers, is in charge of finances. She hands out small packets of zlotys to the neediest and is one of the 19 members of the union's organising presidium.

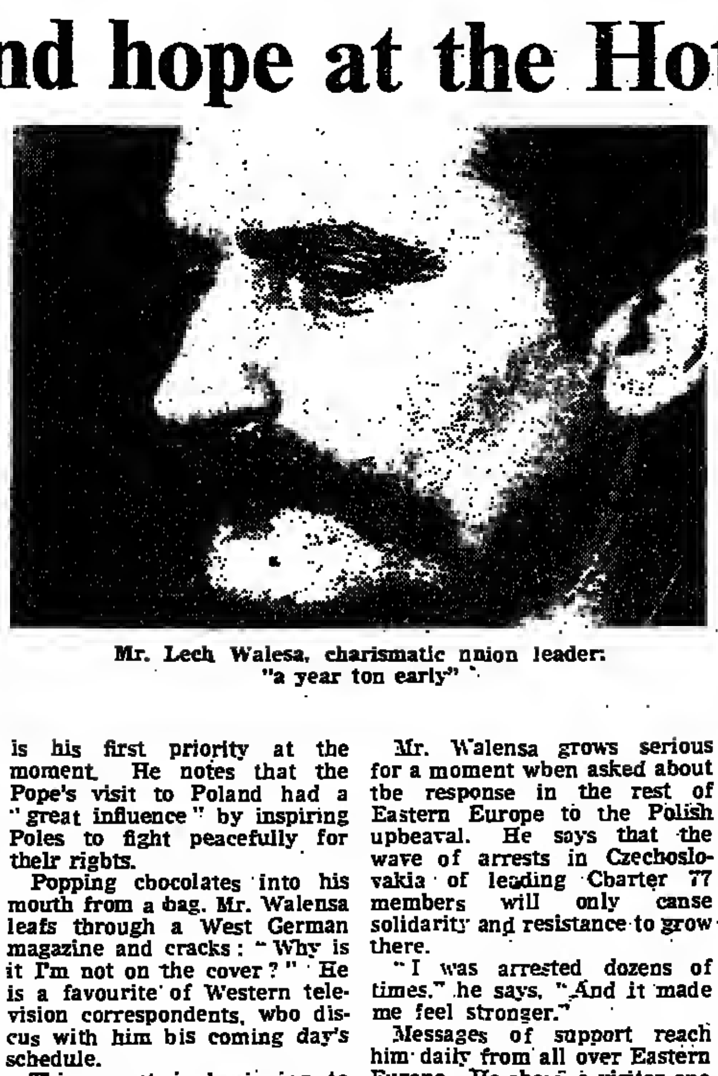
At the other end of the corridor, outside a door marked Lech Walensa, the atmosphere crackles. Men and women from all over Poland, delegates from factories and mines, bring messages of strikes still taking place and take away advice on forming the new unions' organising committees. Ordinary citizens wait for hours in the hallway for any information on political development elsewhere in Poland.

Inside the office Mr. Walensa sits slouched in a high-backed swivel chair underneath a huge potted palm. His bodyguard, a strapping shipyard worker, sits opposite and passes a message to him from his wife.

"The strike took place a year too early," Mr. Walensa moans. "We weren't prepared for it. If it had taken place next year, we would have had the statutes drawn up. Now we have chaos."

His sober expression quickly clears and with evident pleasure he tells about a meeting with the Minister of Heavy Industry. It is the Government which now comes to Mr. Walensa with requests. When meeting dark-suited Government officials he keeps on his colourful "guard" of an open green-patterned shirt.

As for his planned visit to Rome and Pope John Paul, he says he still wants to go, but that setting up the new union is his first priority at the moment. He notes that the Pope's visit to Poland had a "great influence" by inspiring Poles to fight peacefully for their rights.



Mr. Lech Walesa, charismatic union leader: "a year too early"

Popping chocolates into his mouth from a bag, Mr. Walensa leafs through a West German magazine and cracks: "Why is it I'm not on the cover?" He is a favourite of Western television correspondents, who discus with him his coming day's schedule.

This aspect is beginning to worry some of his advisors, but in Poland no one has seen Lech Walensa on the screen since the Gdansk strike ended.

Mr. Walensa grows serious for a moment when asked about the response in the rest of Eastern Europe to the Polish upheaval. He says that the wave of arrests in Czechoslovakia of leading Charter 77 members will only cause solidarity and resistance to grow there.

"I was arrested dozens of times," he says, "And it made me feel stronger."

Messages of support reach him daily from all over Eastern Europe. He shows a visitor one letter that just arrived from the Ukraine. Although he has never travelled outside Poland, Mr. Walensa says workers elsewhere in Eastern Europe have the same dreams as Poles.

"And now I have to talk with my advisors," he says, swivelling 90 degrees in his chair. The quick grin and twinkling eyes conceal this metalworker's iron determination.

One of his aides says Mr. Walensa is particularly angered because the new union until now has been denied access to printing facilities. Meanwhile the old Government union has been distributing leaflets in the shipyards warning workers they will lose their social benefits if they defect to the independent union.

After he hinted to local party officials that the workers were getting "impatient" over not seeing their views reflected in Gdansk's district newspapers, the Communist Party agreed on Friday to publish a long article giving the standpoint of the presideum of the MKZ, the union organising committee.

Young men and women arrive in the Hotel Morski from various parts of Poland with their canvas shoulder-bags filled with underground newsletters. Others pick the printed material for distribution. The publications bear imprints such as the "Free handprinted publishing house, in the fields, Polska."

Hundreds of young men from the shipyards and offices in Gdansk have taken holidays to help organise the new union. They say at least ½m signatures have been collected from Polish factory and office workers, scientists and actors, who are prepared to leave the old union and join the new one.

For some time to come, the headquarters of the new independent union will remain in Gdansk rather than move to Warsaw as its greatest strength comes from the nearby shipyards.

Most of the issues thrashed out at the endless meetings in the Hotel Morski are practical, organisational ones in which money plays an important role. The union is advising workers not to leave the old union until it can provide them with the same social benefits.

Some questions, however, go to the heart of Communist ideology. The organisers of the new union in Warsaw have proposed that Communist Party members joining the independent union will not be subject to the party's authority. This is something Moscow could never accept and the view in Gdansk is that it would scare away too many party members. Roughly 10 per cent of the signatures supporting the new union are from party members.

The evening 6.10 pm flights from Gdansk to Warsaw is a remarkable sight. Members of the Opposition from Warsaw, who have been to the Hotel Morski for consultations, mingle with businessmen returning to the capital. Jacek Kuron, the influential head of KOR, the social self-defence committee, waits patiently with his boarding card in hand while behind him stand men for the political police who keep close watch on Mr. Kuron 24 hours a day.

U.S. consults allies on arms control

BY OUR BONN STAFF

THE UNITED STATES started intensive consultations with its West European allies yesterday to put the finishing touches on arms control proposals to be discussed with Moscow.

In Bonn, Mr. Warren Christopher, U.S. Deputy Secretary of State, met Herr Hans Dietrich Genscher, West Germany's Foreign Minister, to discuss the possible framework for future Euro-strategic talks. One of the main problems has been what sort of consultative role should be assigned to Western, or indeed Eastern, Europe when the Soviet and U.S. meet to discuss, among other things, the Soviet medium range nuclear weapons targetted on Western Europe.

In Brussels, meanwhile, the North Atlantic Treaty Organisation's special consultative group began two days of talks yesterday, also aimed at settling details of the Western position before Mr. Andrei Gromyko, the Soviet Foreign Minister, meets Mr Edward Muskie, the U.S. Secretary of State, in New York on September 25.

The West European allies seem to be attaching considerable symbolic importance to the meeting which they hope will re-establish a dialogue on arms control that was interrupted by the Soviet invasion of Afghanistan.

West German officials admitted yesterday that Chancellor Helmut Schmidt, recently sent a letter to Mr. Leonid Brezhnev, the Soviet President, saying that medium-range weapons—that is, those that directly threaten Western Europe—should be limited at the lowest possible level. The letter was effectively a reply to one sent by Mr. Brezhnev calling for "the speediest possible start to arms negotiations."

Apart from Europe's possible consultative role in future super-power arms talks, which both sides agree should be started before SALT II is ratified, there are a number of delicate issues to be discussed and if possible ironed out before the Gromyko-Muskie meeting. These include:

- How to react to the Soviet proposal of including forward based systems in the early round of super-power talks.
- Questions of protocol: what forum would be best suited for future talks, given that SALT II has not been ratified.
- The exact timing and scheduling of future meetings.

It is acknowledged by Bonn officials that while the Muskie-Gromyko meeting is of great symbolic value, little concrete can be achieved before the result of the U.S. presidential elections is known. Moscow, despite Mr. Brezhnev's letter, is reported to feel the same.

Italian guarantee for Malta

By Rupert Cornwell in Rome

ITALY and Malta yesterday exchanged notes formalising the understanding between the two countries on the guarantee of Maltese neutrality and paving the way for a steady flow of Italian economic aid to the island.

The exchange took place at separate ceremonies in Rome and Valletta. As far as the Italian government is concerned, the terms now go to the Cabinet for approval. The amount of aid was not disclosed by the Foreign Ministry, but is believed to be around L20bn (£10m) annually over five years.

The understanding will come into force as soon as Malta has issued a specific declaration of its own neutrality. This will make clear that the island will not adhere to any alliance, nor permit on its soil foreign military bases or soldiers, nor extend ship-repair facilities to either U.S. or Soviet vessels in the Mediterranean.

Rome has promised to recognise Valletta's neutrality and to urge other countries to do the same. Should Malta's new

The agreement, which follows the sudden worsening of relations between Malta and its would-be patron and protector Libya, is the most vivid sign yet of Italy's more vigorous foreign policy stance in the southern Mediterranean.

Turkish strikers obey back-to-work order

BY METIN MUNIR IN ANKARA

MORE THAN 50,000 striking or locked out Turkish workers went back to work yesterday after the country's military rulers banned strikes and lock-outs. Employers were ordered to grant these workers and a number of others involved in disputes a 70 per cent interim pay increase, pending the settlement of labour contracts.

The country was reported to be quiet throughout as the Generals in charge of law and order continued to issue decrees intended to restore calm. The junta announced that it would persevere in the economic stabilisation programme being followed by the ousted civilian regime.

A statement issued by the National Security Council—the six-member junta—said: "The application of the economic programme and the agreements and protocols made in connection with it for the purpose of repairing and improving the economy will continue."

It was signed by General Kenan Evren, chief of staff, who led last Friday's bloodless coup which overthrew the right-wing Government.

An official advising Gen. Evren on economic matters said the statement meant that until long-term economic policies were drawn up, the military government would abide by the letter of Turkey's standby agreement with the International Monetary Fund. The statement was a signal to the Fund that the new Government was replacing the signature of the ousted Government with its own.

The statement, the official said, also covered the previous Government's programmes for liquidating debts to suppliers totalling nearly $2bn (£827m), debt restructuring agreements with the Organisation of Economic Co-operation and Development countries and other documents pertaining to the large Turkish debt.

The declaration was also intended to reassure the Turkish business community and Western Governments and financial institutions.

A test of how the IMF views the new regime will come in the second half of this month when it is due to release $91m under the $1.6bn standby accord.

The behaviour of Mr. Turgut Ozal, Mr. Demirel's chief economic advisor and the architect of his economic measures, will be a significant indicator of Gen. Evren's economic intentions. He and Mr. Ismail Hakki Aydinoglu, governor of the Central Bank, have been advising the new Government and the indications so far are that their proposals are being taken seriously.

Giles Merritt in Brussels writes: Belgium is withholding its troops from North Atlantic Treaty Organisation exercises now being held in Turkey. Foreign Ministry officials said yesterday that the decision not to send a battalion of commandos was taken on Friday as a protest against the Turkish coup. But it also falls into the *framework of Belgian attempts* to cut defence costs.

Suarez call for vote of confidence

By Robert Graham in Madrid

SPAIN'S Prime Minister, Sr. Adolfo Suarez, is today expected to seek a vote of confidence from Parliament for his new Government, sworn in a week ago.

The vote will be based on a programme which will be largely made up of economic measures to tackle unemployment and to boost growth.

This is the first time that Sr. Suarez has sought such a vote since being confirmed in office after the general election of March 1979. He is certain to *obtain the vote*, and is using the procedure as a means of launching his new Government.

The ruling Democratic Centre party holds 166 of the 350 parliamentary seats. Soundings indicate that Sr. Suarez can count on the eight votes of the conservative Catalan nationalist party of Sr. Jordi Pujol, and probably on the nine votes of the right-wing Democratic Coalition led by Sr. Manuel Fraga. The Basque nationalist party has recently announced its return to Parliament after an eight-month boycott and its seven votes are also likely to go to Sr. Suarez.

If this proves to be the case, the Prime Minister will be able to claim that the vote is a success compared with voting on a censure motion sponsored by the Socialists in June.

Observers believe there are unlikely to be major policy changes in Sr. Suarez's policy document.

£400m trade deficit for France

BY ROBERT MAUTHNER IN PARIS

FRANCE suffered another substantial trade deficit in August of FFr 4.02bn (about £400m), seasonally adjusted, bringing the total shortfall since the beginning of the year to more than FFr 40bn.

However, the August deficit showed an improvement of FFr 1.6bn on the previous month's figures and was much smaller than the record monthly shortfall of FFr 7.2bn in May.

The adverse effect on the trade account of highly priced energy imports, particularly oil, was underlined by the figures for non-energy trade, which showed a surplus of FFr 7.9bn in August. This was FFr 2.4bn higher than the average monthly surplus over the first seven months of this year.

But the trend for energy imports improved in August after an exceptional increase in July, the Ministry of Trade noted in the communique issued yesterday.

French exports of agricultural products and processed foodstuffs continued to do well last month and showed a combined surplus of FFr 1.7bn. The Ministry also stressed that trade in capital goods, which was in surplus to the tune of FFr 1.6bn in August, had shown a marked improvement as the result of the good export performance

Trade in consumer goods, too, was in balance for the first time since September 1978, thanks to satisfactory exports and lower imports.

The latest trade figures are in line with estimates made last month that France's trade deficit for 1980 as a whole would probably widen to FFrs 50bn, about five times that of 1979.

Dutch aid projects under fire

By Charles Batchelor in Amsterdam

MANY DUTCH development aid projects are poorly planned and inadequately supervised, according to a report which has just been made public by the Overseas Development Ministry.

The report is particularly worrying for the Netherlands, which is one of the world's most generous aid donors. It is joint second with Norway in the table of official aid, compiled by the Organisation of Economic Co-operation and Development, and is exceeded only by Sweden. Dutch aid amounted to $1.4bn (£579m) in 1979 or 0.93 per cent of gross national product.

The report was drawn up by the development aid inspectorate, which was set up three years ago. It advises that many of the programmes should be altered radically or even brought to a halt.

Mr. Jan de Koning, Minister for Development Aid, has denied in a letter to Parliament that the report's conclusions can be applied to the entire Dutch aid programme. Only 90 of the 2,000 aid projects had been covered. The *Ministry* is carrying out a more thorough survey

Swedish engineering workers attacked

SWEDISH engineering workers spend less time on their jobs than their colleagues in 12 other West European countries, according to the Swedish engineering employers' association, *William Dullforce* reports from Stockholm. Full-time employees worked only 1,513 hours on average last year compared with the 1,902 hours chalked up by British engineering workers, the association says. A high rate of absenteeism and little overtime were blamed.

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European airline costs '£620m too high'

BY MICHAEL DONNE, AEROSPACE CORRESPONDENT

AIRLINE costs in Western Europe are between $1.5bn (£620m) and $2bn (£827m) more than they need be, as a result of deficiencies in air traffic control systems and other problems, such as extra flying caused by the existence of large military areas closed to civil aircraft.

The International Air Transport Association, representing most of the major scheduled airlines in the world, in a study designed to find out why the costs of air journeys in Europe are greater than for comparable distances in the U.S., says that heavy charges for air traffic control are a major factor.

Eurocontrol, the international body providing air traffic control services in much of North-West Europe, is planning an increase of up to 40 per cent in its charges next year, and will collect up to $1.2bn from airlines using the airspace for which it is responsible.

The IATA study shows that if Western Europe had the same freedom from restricted military areas and a correspondingly unified air traffic control system, such as exists in the U.S., European airlines could save up to 600m gallons of fuel a year, worth $800m, and cut out some 240,000 hours of unnecessary flying. At present the excessive number of different national traffic systems, add extra distance and flying time to European operations.

If Europe adopted U.S. methods of airport funding (either on a federal basis or through local bond issues) instead of loading the charges onto the airlines, there would be a further saving for the air transport industry of about $700m a year.

In Britain alone, more than 20 foreign airlines are banding together to fight dearer airport fees charged by the British Airports Authority, which they say will result in higher fares to

Australia renews threat to divert trade from EEC

BY LARRY KLINGER IN BRUSSELS

AUSTRALIA'S Deputy Prime Minister, Mr. Douglas Anthony, repeated forcefully yesterday that his Government might divert trade worth up to A$1bn (£485m) from the European Community if there was no satisfactory settlement to Australia's trade difficulties with the market.

Mr. Anthony said he was hoping to get "a degree of satisfaction" during four days of talks with top EEC officials. Otherwise, his Government would be looking at areas in which its purchasing power could be used to divert trade away from Europe: defence, communications, electronics and transport.

He declined to name specific projects or to specify the countries that might be affected but added that he might give details on Thursday. The Australian Cabinet is currently studying the implications of cancelling an order worth A$200m for four Airbuses.

The Australian trade quarrel with the EEC centres on the Common Agricultural Policy, which the Australians see as not only shutting them out of their traditional European markets but threatening their new markets for dairy products, sugar and meat by "dumping" EEC products on world markets at subsidised prices.

Roger Boyes accompanies Herr Genscher on the campaign trail

Over the top with Bonn's Foreign Minister

Theatre Square, Memmingen, Bavaria. Early Friday evening. Enemy territory: The West German Foreign Minister's bullet-proof Mercedes bumps over the cobblestones behind Memmingen theatre and splutters to a halt. The star is 35 minutes late, the crowd is bored but the sun is shining and almost everybody is prepared to forgive and forget. Hans Dietrich Genscher springs onto the platform, slips, recovers his balance, hitches up his *trousers (a pre-election diet* has caused sartorial problems), acknowledges the polite applause.

Bavaria is the homeland and power base of Franz Josef Strauss, undisputed leader of the Christian Social Union, State Premier and the opposition's combative contender for the Chancellory. In the industrial Ruhr, he is the man they hate to love, here he is "our Franz Josef." Herr Genscher has travelled down from Bonn to win the hearts and minds of Memmingen burghers to the Free Democratic Party, the junior coalition partner.

After a 25 minute speech—ranging from foreign policy (*a triumph for stability and reason*), economic policy (ditto)

to the negative qualities of Herr Strauss (unstable, unreasonable)—Herr Genscher appears to have won a few hearts but not all that many minds. One old-age pensioner says "he has such a nice voice, such a sympathetic boy" (Herr Genscher is 53).

A middle-aged schoolteacher complains that Herr Genscher did not mention the threat from the Left-wing in his speech but he still scrambles to get an *autograph from the FDP* chairman ("for my children, Herr Minister").

Herr Genscher's speech was his formula election piece, tried and tested throughout Germany. It finishes with an appeal to the listeners: "The overwhelming lesson of our generation is that war is unbearable — help me, help us, to make sure that it will never happen again."

This climax ties up neatly with the introduction which is amended slightly in Memmingen to take in the military coup in Turkey: "We live in an uncertain world—Afghanistan, Poland, Turkey. . . . We cannot afford experiments. The coalition must continue. . . ." This then is the tenor of his campaign: Germans should vote FDP and thus keep out the unpredictable figure of Herr Strauss, keeping Chancellor Helmut Schmidt in power and ensuring that the demon Left-wing of the Social Democrats does not have free rein.

A local FDP official tells the crowd: "This is a fast-moving world." For Herr Genscher it certainly is. Fifteen minutes of autograph signing, five minutes of hand-shaking with the local FDP cell (eyes glaze), and short talk with a man in a wheelchair. Time has run out

Beer Tent, Wolzheim, Baden Wuerttemberg, 20.30 Friday night: Friendly territory, Wilhelm Pflanz, a local farmer and gifted party organiser, is whipping up the crowd in anticipation of Herr Genscher's arrival. There is no need. The mood resembles a revivalist meeting with the added advantage of free-flowing beer. These are the FDP party faithful, overwhelmingly farm-workers, overwhelmingly fans of Herr Josef Ertl, the FDP Agricultural Minister and trusted friend of the German (if not the British) farmer.

Herr Genscher arrives from Memmingen, a three-hour drive, bounds (this time successfully) onto the platform, takes off his jacket, hitches up his trousers. There are genuine cheers as Herr Genscher clasps Herr Pflanz and attempts a local dialect.

The set speech has been shifted around a bit for the Walxheim farmers—agriculture plays a more important role, the foreign policy part is reined in. The restructuring scarcely matters—the audience is too excited to listen. Volume is everything, content is of only passing interest. Every quip is backed by a roll of drums by the local farmers association band, prompted by Herr Pflanz. Every side-swipe at the Social Democrats or Herr Strauss is greeted with ecstatic applause. This sometimes borders on the ridiculous.

The FDP (and indeed the SPD) case is "The coalition must be allowed to continue what it has been doing up until now, especially with everything so uncertain in the rest of the world." The opposition case is: "Under no circumstances can we allow the coalition to continue what it has been doing until now, especially with everything so uncertain in this world." Somewhere in between, the usual agenda of an election—issues, for example—have been lost.

Herr Genscher . . . "such a nice voice"

The party's main election slogan is "this time, everything is at stake (*fiesmal ghet es um das ganze*), this time vote for the FDP." This is a tacit reference to the North Rhine Westphalian elections which saw the FDP, sandwiched in the battle between Chancellor Schmidt's SPD and Herr Strauss's Christian Democratic opposition, achieve only 4.9 per cent of the vote, effectively pushing it out of the State Parliament. The same, the slogan implies, could happen again on October 5.

Reagan rallies supporters in gathering at Capitol

BY DAVID BUCHAN IN WASHINGTON

MR. RONALD REAGAN, together with Mr. George Bush, his Republican running mate, yesterday held a big rally with Republican Congressional leaders on the steps of the Capitol to show their party's "unity of purpose" in seeking to end the "divided leadership" that President Jimmy Carter has given the country.

Mr. Reagan told a crowd of several thousand Republican candidates and Loyalists that "never before in history have so many legislative proposals been ignored" by the Congress as under the Carter Presidency.

The Republican challenger went on to promise a five-point action plan to be accomplished in the first year of a Reagan Administration. This includes spending and pay cuts in Congress as an example to the country, a reduction in non-defence spending while "protecting those in need," an across-the-board paring in income tax, an effort to get private investment to create inner city jobs, and increased defence spending.

Mr. Carter has certainly had a rough ride from Congress. Its defeat of his proposed petrol tax increase last May, for instance, was the first occasion for many years that a President had been over-ruled by a Congress controlled by his own party. But even on their most optimistic calculations, Republicans can hope to win control only of the Senate this year, with the House of Representatives virtually certain to stay under Democratic sway.

Both Mr. Reagan and President Carter yesterday prepared for campaign trips this week to Texas, a large state with a heavy weighting of electoral college votes.

Mr. Carter carried the state four years ago, but Mr. Reagan has shown very considerable strength there. Of some small comfort to the President is the fact that Mr. John Anderson, the independent candidate, has made only a slight showing in the Texas opinion polls and may siphon off few votes there from the Democratic ticket.

The Carter campaign, now well aware that it is in a very tight race, this week lost one of its top strategists when Mr. Tim Kraft, the President's expert on field operations, took a leave of absence from the campaign because he is now being investigated by the FBI for alleged use of cocaine some three years ago.

A special prosecutor has been appointed to the case, as in the recent allegations of cocaine use by Mr. Hamilton Jordan, the President's campaign chief. Those allegations were subsequently found to be groundless.

Carter risks storm over Nicaraguan aid move

BY DAVID BUCHAN IN WASHINGTON

PRESIDENT JIMMY CARTER has risked opening up another foreign policy campaign issue with Mr. Ronald Reagan, his Republican combatant for the White House, by giving the final go-ahead to a controversial $75m (£31.2m) aid package to the left-wing Nicaraguan Government.

Specifically, the Carter Administration has now found that Nicaragua is not supporting violence or terrorism in other Central American countries, thus meeting a condition set by Congress in approving the aid which has long been promised to the Managua Government.

The move was immediately attacked by Mr. Reagan's Republican supporters, including Representative Robert Bauman, who charged that Nicaragua was "not only directly engaged in terrorism in Guatemala and El Salvador, but also being used as a conduit for Cuban arms."

The official Republican Party platform, on which Mr. Reagan is running for President, includes a strong condemnation of the left-wing Sandinista Government which ousted former President Anastasio Somoza in Nicaragua, in 1979.

Defending the aid move, White House officials argued it was important for the U.S. to be seen to be supporting the political pluralism, free enterprise and Press that still existed in Nicaragua and that the Administration did "not intend to abandon the vital Central American region to Cuba and its radical Marxist allies."

It was earlier thought likely that Mr. Carter would stay his hand on Nicaraguan aid until after the November election and avoid clashing with Mr. Reagan, who has something of a bee in his bonnet about Central American "Communism."

But pressure on the Administration to help Nicaragua has come from a consortium of U.S. banks, who recently negotiated a refinancing of $600m of Nicaragua's debt.

Evidence that the Nicaraguan economy needs all the help it can get came yesterday in the annual report of the Inter-American Development Bank, based in Washington. The bank estimated that Nicaragua's Gross Domestic Product dropped by 25.8 per cent last year in the chaos produced by the civil war.

This contrasted sharply with Latin America as a whole, where the bank said GDP rose by 6.2 per cent in 1979, an acceleration from the average growth rate of 4.7 per cent in 1976-78 and 3.1 per cent in 1975.

This was faster than growth in other areas of the world, the bank noted, but was accompanied by swelling balance of payments deficits and heavier external debt. In addition Latin America's population growth absorbed much of the benefits of the region's faster growth.

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Virgin Islands pins its future on oil and minerals

BY GORDON WEIL, RECENTLY IN THE VIRGIN ISLANDS

MR. JAMES DAVIDSON, Governor of the British Virgin Islands in the West Indies, sees the probable launching of oil and mineral exploration as a "very important turning point" for a territory which in the past has based its prosperity on tourism and a flourishing yacht chartering business.

For the 11,500 inhabitants living in the UK dependent territory, most of them in Road Town on the largest island, Tortola, the prospect of oil and mineral wealth is both appealing and threatening. The possible oil revenues are clearly attractive, but the Government wants to be sure the tranquil beauty of the island group will not be shattered by the boom town flotsam of the oil industry.

In August, Mobil Oil paid the Government a $360,000 (£150,000) fee for the right to proceed with oil drilling in an area 14 miles north of the island of Jost Von Dyke. It plans a seismic study and will begin drilling as soon as rigs are available, probably sometime in 1981.

Right on the heels of Mobil came Noranda, the Canadian group, which seeks similar exploration rights north of Anegada, in an area immediately to the east of the Mobil concession. In addition, Noranda wants to prospect for copper and molybdenum on Virgin Gorda, a popular resort island. The Government is withholding its decision on the Noranda requests until discussions with its London-based consultants are complete.

"We do not want the oil companies to disrupt the way of life," says Alfred Penn, a highly respected leader of the local community. Mr. Penn believes the Government obtained sufficient assurances from Mobil and notes that there has been no adverse reaction to the Mobil concession.

The Virgin Islands were ruled by Denmark (ignoring brief interludes of British rule early in the 19th century) until 1917. At that point, four large islands and 32 smaller ones were taken by Britain, while three other large islands and 50 smaller ones were bought by the United States. The adjoining Virgin Islands of the United States, with a population exceeding 63,000, has been a stepping stone for increased U.S. commercial interest in the British territory.

In late 1978, Bahamas International Trust Company Limited launched a branch operation of a type long identified with the Cayman Islands. Four commercial banks, including Barclays and the Bank of Nova Scotia, also have offices, and the Government clearly wants the British territory to capture some of the Cayman business.

In 1979, the Government took $217,000 in fees from off-shore operations, and in the first eight months of this year revenues rose to $400,000. The total official budget for 1980 is $11.5m. (The U.S. dollar is used as the local currency.)

Washington worries a bit about this development and, several months ago, the U.S. Treasury Department, concerned about the practice of taking such fees, began pressing for renegotiation of relevant tax treaties. Mr. Davidson is hopeful that an accord can be reached allowing the U.S. to close tax loopholes, while leaving the British Virgin Islands Government with "reasonable off-shore business and revenue." Most officials believe a new tax treaty, currently being negotiated directly by the Government with Washington, will result in a reduction in receipts.

Even without off-shore drilling and off-shore capital, the territory has seen steady growth. Many attribute this success to the centralised control that results from the Governor's power

Tourism boosted per capita GNP to $2,000 a year in 1978, a healthy level for the Caribbean. But oil exploration reduces the territory's vulnerability to fluctuations in tourist income.

Politically, some complaints have been voiced about the Governor being named by London rather than locally. In 1978, some natives demanded that London remove then-Governor Walter Wallace, because he had commuted the death sentence of a convicted murderer.

A year later, the local Civil Service Association demanded recall of Governor Davidson, who had released the body of a young American who had drowned, even though a magistrate insisted his inquest was not complete. The loser in last year's legislative elections complained about Mr. Davidson's selection of his rival as Chief Minister. In all cases, London backed the man on the spot.

In fact, Britain has made it clear that it will insist on naming and backing its own officials, unless the Virgin Islanders opt for independence. But there seems to be little interest in a break with Britain.

Perhaps one reason for the island's apparent social and political calm is the greater local concern for the fruits of continued economic development than with political ideology. And it's hard to argue against prosperity.

Trudeau faces tough battle with premiers

BY JIM RUSK IN OTTAWA

EIGHT OF Canada's ten provinces will oppose Mr. Pierre Trudeau, the Prime Minister, if he moves unilaterally to give Canada its own constitution in place of the British North America Act passed by the U.K. Parliament in 1867.

As last week's constitutional conference on the issue broke up in failure over the weekend, eight premiers issued stern warnings to the Prime Minister to move slowly and cautiously as he and his Liberal Government decide this week what they will do next.

Several of the premiers, led by Mr. Allan Blakeney of Saskatchewan, said that enough progress had been made for the Federal Government to reconvene the talks after a short break.

Only Premiers William Davis of Ontario and Richard Hatfield of New Brunswick said they would go along with Mr. Trudeau if he decides on unilateral "patriation," and several key premiers said they would oppose it.

Mr. Rene Levesque of Quebec vowed he would use all political and legal means necessary to stop Mr. Trudeau, and Mr. Peter Lougheed, Alberta's premier, warned that the Prime Minister would be acting "at his peril" because western Canadians will "react very aggressively."

Premier William Bennett of British Columbia added that he and the other premiers had advised Mr. Trudeau that the long-term interests of Canada is more important than the Prime Minister's short-term political timetable to reform the constitution quickly and then retire from public life.

Mr. Trudeau will meet his Cabinet in caucus this week to decide what to do next after Canada's 13th failure since 1927 to arrive at a formula for constitutional patriation and amendment.

Peru seeks meetings to reschedule foreign debt

By Doreen Gillespie in Lima

PERU is to call for a series of meetings of the Paris Club of the Western nations and Japan next year to refinance its foreign debt.

According to Government officials, Peru will also try at the meetings to obtain new long-term loans from international banking organisations to finance the country's development programmes.

Two meetings are likely. The first would be with the World Bank, international credit agencies and Governments having bilateral agreements with Peru. The second one being planned would be with commercial banks.

The scale on which Peru is seeking to refinance is not immediately clear. Two years ago the previous military Government rescheduled $248m (£103m) of the country's external debt which then stood at $8bn, although it prepaid $602m (£251m) this year from the remains of the 1979-80 refinancing package.

According to the latest projections Peru's debt service ratio for 1980 will be 33.4 per cent, and 33.9 per cent in 1981.

President Belaunde's Accion Popular Government has been stressing since it took office in July that it intends to seek soft-term foreign finance instead of commercial loans.

These are to be used for development projects in electricity, agriculture, mining, roadworks, health and housing. The World Bank is seen as the main source from which the Government is hoping to borrow up to $1.2bn over the next five years.

The Bank has already had technical teams in Peru and this week has opened an office in Lima.

Hotel boom in New York

BY PAUL BETTS IN NEW YORK

NEW YORK, still struggling huge financial problems, growing crime and unsalubrious housing in its poorer neighbourhoods, is currently undergoing a major hotel boom.

Hotels are being renovated and built at an unprecedented pace. As many as six new tower block hotels are scheduled to be opened this year, including two this month.

A new $100m (£41m) 51-storey hotel opened yesterday on Madison Avenue, just behind St. Patrick's cathedral. The new hotel, the Helmsley Palace—part of the Helmsley hotel chain—offers accommodation in 947 rooms at prices ranging from $140 to $170 a double room for one night.

Nearly 5,000 new rooms will become available when five other hotels are completed this year, including the Milford Plaza, the Harley, the Vista International and the Grand Hyatt.

Many older hotels, like the St Regis, the Berkshire Place and the Westbury, have also been refurbished to their former glories in anticipation of the growing number of tourists and businessmen coming to New York.

The boom has in part fuelled by the dramatic rise in convention visitors to New York, which has once again become a major convention centre. Last year there were about 4.3m convention visitors, compared with 2.7m in 1973.

At the same time, the city has experienced something of a renaissance in tourism from overseas and from within the U.S.

Mexican trade deficit rises

By William Chislett in Mexico City

MEXICO'S trade deficit for the first seven months of the year has risen 6 per cent over the corresponding 1979 period to 37.6bn pesos (£670m), despite a large increase in the value of the country's oil and natural gas exports.

According to preliminary statistics issued by the planning Ministry, oil and gas exports were worth £2.15bn, 199 per cent more than in January-July 1979, out of total exports valued at £3.44bn. Exports of manufactured goods rose by only 6 per cent.

But this steep rise, which reflected Mexico's rapidly growing oil wealth, was offset by imports worth £4.1bn., 60 per cent more than in the first seven months of 1979.

Battle is joined for Asia's readers

BY PHILIP BOWRING IN HONG KONG

THIS WEEK the U.S.-owned, Paris-based International Herald Tribune started facsimile printing via aatellite in Hong Kong. The event marks a new phase in the growing battle for readers and advertising revenue in Asia and the Pacific, regions which have the world's highest economic growth rates and largest English-reading audiences outside Britain and North America.

Thhe event also shows how a combination of aatellites, multiple circuits and OPEC oil price increases are altering the face of international publishing.

The Herald Tribune already has facsimile plants in London and Zurich. But thia 10,000-mile leap to Hong Kong will land it in direct competition with the four-year-old Hong Kong-based Asian Wall Street Journal, half hrother of the U.S. Wall Street Journal. The Asian Wall Street Journal was the first attempt to create a region-wide daily paper.

Meanwhile, periodicals as diverse as Business Week, the Economist, Newsweek and the Institutional Investor are starting or stepping up interest in the region.

The Herald Tribune is not just a publisher of a small but influential interantional newspaper. It is owned by three U.S. media giants—Whitney Communications, the New York Times and the Waabington Post.

At present the Wall Street Journal is the only national paper in the U.S., a leader in facsimile technology, it now prints in 14 locations and plans more. But as the Herald Trihune moves into competition with Dow Jones gentlemanly mutual esteem is giving way to sniping and aggravation. tion.

The Herald Tribune has been hluntly told that AP-Dow Jones Economic News Service stories could not appear in Asia, as the Journal had a monopoly of AP-DJ in Asia. Sparks flew because the agency is half-owned hy Associated Press, a non-profit co-operative owned by many U.S. newspapers. As a result of the Dow Jones move, the Herald Tribune is baving to remake its business pages for Asia. The Herald Tribune'a New York stock prices come direct from the New York stock exchange computer and not via AP-Dow Jones.

Bnt the Journal is running to stay ahead. It has advanced its printing schedule by three hours to be on the streets of Hnng Kong and on flights to other Asian citiea at the same time as the Herald Tribune.

The Tribune and The Journal are very differeot products hut will be competing for both corporate advertising and top-of-the-market readers. The Journal started life as little more than a slimmed down version of the New York paper. But the owners were prepared to pump io more money, and change the formula. Asian reporting staff was tripled and it now gives priority to Asian news written hy its own correspondents. Circulation, which at one time was under 10,000 is now 21,500.

In lts first year the Asian Wall Street Journal claims that it beld its losses to about $1m. Despite increased editorial spending, losses are said to have dropped sharply. Accordiog to Mr. John Orr; the Asian Wall Street Journal publisher, "Losses last year were closer to $100,000 than to $200,000. We are continuing to move toward the black and expect to reach there in our fifth year of publication."

The Herald Tribune has much the same target audience as the Asian Wall Street Journal, but it has no intention of trying to become an Asian paper. It will aligbtly increase its Asian coverage and reduce the European perspective. Its aim is to become more than ever international in circulation and content. Initially the Asian print run will carry the same advertisements as Europe, but ao Asian advertising edition is expectad to start from January next year. At present Herald Trihune rates, at $135 per thousand circulation per page, are lower than the Journal's $190.

Critics suggest that the Herald Trihune may be trying to foist a mid-Atlantic product onto an Asian market. It is gambling that there is an Asian market for an international paper—though it is not a hig gamble.

The Herald Tribune says it will invest $2m over two years, mostly oo promotion. Printing will be on the machines of Sally Aw Sian, a local Hong Kong Press baroness. The main fixed cost is $250,000 for satellita receiving equipment. Satellite costs themselves will he only $20,000 a month thanks tn the Hong Kong and French cpmmunications autherities which for the first time were willing to offer a non-tied, high speed circuit. Printing the Herald will take only four hours a day.

As a result, the Herald Trihune claims it can break even on circulation alone of 20,000, and perhaps even 16,000. Some madia men are sceptical. They claim that the Herald Tribnne has not fully appreciated the many problems—some of them political—and the heavy hidden costs of circulating a newspaper around Asia.

The Herald Trihune already claims suhstantial advance hulk sales. But reaching 20,000 circulation will not be easy. The cover price, equivalent to $0.40 in Hong Kong and $0.45 ln Singapore is in line with Europe, but it is more than the Asian Wall Street Journal end a lot more than local Asian papers. It will need quality Asian readers as well as expatriate sales if it is to attract the right advertising. Also, there is plenty of daily newspaper competition.

Until the Financial Times started printing In Frankfurt, the Herald Tribune faced relatively little English language competition in continental Europe, where ita daily sale averages about 76,000. But in Asia the Herald Trihune faces competition not only from the Asian Wall Street Journal. It faces the premier newspapers in Singapore, Malaysia, Hong Kong and tha Philippines—all of whioh print in English. Thailand and Japan have respectable English dailies. All extensively use international wire services and quality syndicated articles from U.S. and UK papers, including the NY Times and Washington Post, which form the backhone of the Herald Tribune's own contents.

The struggle for circulation and advertiaing revenue and the shortage of good editorial copy have heightend competitive awareness. The largest correspondent network in Asia is that of the weekly Far Eastern Economic Review, which is 49 per cent owned by Dow Jones. Its staff have traditionally also written for other papers including the Financial Times, the New York Times, Business Week and the Economist. But recently they were all barred from regular outside work.

The Economist now has an advertising office in Hong Kong. There hava been suggestions that bbth it and Business Week might print in the region to save airfreight costs which have gone up by 50 per cent in the past 18 months.

For Time and Newsweek, printing in Asia is old bat. But the circulation war between them has escalated. Time recently apent $2m in eqnipment to transmit colonr by satellite to Hong Kong where its 200,000-circulation Asian edition is printed. Thia has forced Newsweek—which comes from the same atable as the Washington Post and thns has an indirect link with the Herald Tribune—to invest in the same costly equipment.

CIRCULATIONS IN THE ASIAN PACIFIC REGION OF ENGLISH-LANGUAGE PUBLICATIONS:

Time 220,000 (plus 110,000 in Australasia)
Newsweek 205,000 (plus 56,000 in Australasia)
Far Eastern Economic Review (total) 50,100
Asiaweek (total) 24,100
Asian Wall Street Journal (total) 21,500
Business Week 15,700
International Herald Tribune 2,000 (target with Asian printing, 20,000)

COMPARATIVE 1979 ADVERTISING REVENUE FIGURES FOR SOME NON-ASIAN BUSINESS AND REGIONAL PUBLICATIONS/EDITIONS:

Business Week (international Europe) $3.8m
International Herald Tribune (total) $12.6m
The Economist (total) $17.7m
Institutional Investor (total) $2.6m
Euromoney (total) $2.0m
Africa $2.1m
Middle East $1.8m
Middle East Economic Digest $1.8m

Source: Rome Report

ADVERTISING REVENUE FOR FOUR WEEKLIES IN ASIA ($m)

	FIRST HALF				
	1980	1979	1979	1978	1977
Time	9.3	8.1	19.5	14.9	9.7
Newsweek	6.2	5.6	12.5	10.1	7.3
Feereview	2.6	2.3	5.0	4.1	3.1
Asiaweek	0.6	0.5	1.1	1.0	0.6

(Asia and Pacific editions excluding Australasia)

Source: Rome Report

'New conditions' for Iran hostages

BY NASSIR SHIRKHANI

TEHERAN — The speaker of the Iranian Parliament said yesterday the assembly would "definitely" add to the conditions set hy revolutinnary leader Ayatnllah Ruhnllan Khomelni for the release of the American hostages.

Hojatoleslam Hashhemi Rafsanjani said the parllament, which is expected to start dehate on the fate of the 52 hostages this week, would insist on an apology from the U.S. for its former involvement in Iran.

In a statement last Friday, the Ayatollah made no mention of an apology and said the hostages could he freed if the U.S. returned the late Shah's wealth, unhlocked frozen Iranian assets, dropped claims against Iran and promised not to interfere in Iran's affairs.

But when asked at a news conference yesterday whether parliament's conditions would be the same as the Ayatollah's the speaker said: "No, definitely, there are more conditions."

"The Imam has not mentioned all the conditions and he has delegated the issue to the Majlis (parliament)," he said.

Hojatoleslam Rafsanjani, a leader nf the hardline Islamic Repuhlicn Party (IRP), said: "What cannot be ignored is that America must condemn its previous policy in Iran. This is a cnnditinn . . . which the Majlis will insist nn."

Ayatollah Khomeini entrusted the task of setting terms for the release nf the hostages, held hy radical Moslem students since last November 4, to the Majlis in February, a fact he recalled in bis message last Friday.

Speaker Rafsanjani said today's Majlis session would "decide the manner of discussions" abont the bostages, following the weekend's recommendation by the House Foreign Affairs Commission that some form of debate should he started.

"We will decide whether the Majlia will, itself, discuss the issue or a special commission will do it. What form the procedure will take will he decided by the Majlis," he said.

The speaker said the hostages were now the main issue on the assemhly's agenda.

In another development Iran plans to spend U.S.$5hn nver the next four years to build power stations with a total capacity of 5,000 megawatts (MW), Mr. Hassan Ahhaspour, Iranian Minister of Pnwer, said. Reuter

IRAQI vice president Izzat Ibrahim said yesterday his country had recaptured two disputed pieces of territory from Iran and would retake remaining land which it claimed within a week, Renters reports from Rome.

Peking softens Kampuchea stance

By Tony Walker In Peking

CHINA APPEARS to have softened its position nn negotiating a settlement in Kampnchea.

Zhao Ziyang China's new Premier, told Mr. Robert Muldoon, Prime Minister of New Zealand yesterday that withdrawal of Vietnamese troops from Kampnchea was nnt necessarily a precondition fnr the start of negotiations.

Previously, China bas made it clear it was nnt prepared to negotiate while Vietnamese soldiers remained in Kampuchea.

Mr. Muldoon said in Peking that Zhan bad said troop withdrawal would an "important element" of any negotiated settlement, hnt talks could begin while Vietnamese troops remained in Kampuchea.

Diplomats in Peking cnnsider this a major shift hy the Chinese, and significant because the softening of China's position was nntlined by the new Premier in one nf his first fnreign policy statements since his recent appointment.

Mr. Muldoon said the Chinese concessinn bad come up during discussions.

As recently as the mlddle of June, China ruled nut the possibility nf resuming talks with Vietnam over its border dispute. One of the points at issue in these negotiations is Vietnam's continued presence in Kampnchea.

The New Zealand Prime Minister said Zhao had also made clear that China was prepared tn join with the Association nf South-East Aslan Nations and with Vietnam in guaranteeing tbe territorial integrity nf a Camhodian state if a negotiated settlement was achieved.

A settlement could take place, Mr. Muldoon said, after a withdrawal of Vietnamese troops and "some kind of election."

Mr. Muldoon was pessimistic abont tbe possibility of this happening quickly.

Malaysian Cabinet reshuffled

BY WONG SULONG IN KUALA LUMPUR

Datuk Hussein Onn

DATUK HUSSEIN ONN, Malaysia's Prime Minister, yesterday took personal charge of defence in a Cabinet reshuffle that reflected his growing concern over the instability of South-East Asia.

Observers say the Malaysian leader wants to crack down on corruption in the armed forces, at present undergoing massive expansion tn meet the prospect of external Communist threat.

The Malaysian leader's concern over regional instahillty was emphasised at the recent Commonwealth regional heads of Covernment meeting in Delhi, where he made an impassioned speech linking Soviet and Vietnamese occupation nf Afghanistan and Kampuchea as a common threat to the region.

The 1981 Budget, to be announced next month, will be giving defence and internal security the biggest allocations prohably amounting to 21-24 per cent of the Budget.

In the reshuffle, three Mlnisters and three Deputy Ministers were dropped, including Datuk Hussein's brother-in-law, Hamzah Ahu Samah, the Law Minister. The Law Ministry has heen abolished.

Twn Deputy Ministers were made full Ministers. They are Mokhtar Hashim, who takes over as Minister nf Culture, Youth and Sports, and Rafidah Aziz, who gets the Public Enterprises portfolio.

Miss Aziz, 36, an economist by training, holds the record for being the yuungest—and second woman—Minister in the Cabinet.

The reshuffle reflected the moderation that is the ballmark of Datuk Husseln's four-and-a-half-year rule.

Haji Suhalmi, leader of the youth dlvision of the ruling United Malays National Organisation, was appointed Deputy Agriculture Minister—a move intended to steer the party's youth wing away from its traditional role as a vocal pressure group.

Key Ministers—Dr. Mahathir, the Deputy Prime Minister, Ghazali Shafie, Home Minister, Tengku Razaleigh, Finance Minister, and Musa Hitam (Education)—retained their portfnlios.

Rescue plan for Indonesian bank

BY RICHARD COWPER IN JAKARTA

BANK DAGANG National Indonesla, a private Indonesian bank which defaulted on debts estimated at around $30m in 1978, may receive a new lease of life this week if plans hy an Indonesian entrepreneur to take a 50 per cent ahare in the bank go through.

If the salvage operation comes nff, it could mark the end of what has turned into Indonesia's blggest banking scandal in years. Bank Dagang plunged into default on around $30m in debts owed to a number of European, Asian and U.S. banks following the collapse of an international fund-raising scheme in the middle of 1978.

Fnllowing the disclosure of the defaults last year, Indoneaia's central hank suspended Bank Dagang's foreign exchange licence preventing it from engaging in further international transactions.

Now hnwever, the French Government bank Société Générale has agreed to lend Sjamsul Nursalim, the Indonesian entrepreneur, $15m to buy about 50 per cent of the bank's shares and obtain a mortgage on all or most of the rest.

Bank Dagang then plans to use the money to provide partial repayment to the bank's international creditors. If everything goes according to plan, the takeover and the repayment should be signed this week.

Sri Lanka Finance Minister to see IMF

BY MERVYN DE SILVA IN COLOMBO

SRI LANKA'S Finance Minister, Mr. Ronald de Mel, leaves tomorrow for the Commonwealth Finance Ministers' meeting in Bermuda, and than goes in Washingtnn for crucial negotiations with the International Monetary Fund.

The Minister, who will be accompanied by four senior nfficials, hopes to get IMF agreement to draw SDR 60m (about £30m), the balance of this year's quota of SDR 90m.

While the Government is confident that aimilar support will also be extended next year, no formal announcement is expected until after the Budget is presented on Novemher 5.

Caught between political pressures and e mounting trade deficit, the Finance Minister has resorted to a "judicious pruning" of all Ministry estimates.

All Ministers have been told that the annual ceilings in the 1980-84 pnblic investment programme cannot be exceeded, despite escalating costs. During the recent strike, bowever, the Government promised an all-round pay rise.

In search of new sources of aid and investment, Mr. de Mel will meet OPEC Finance Ministers in Washington before going to Brazil.

Zimbabwe hit by wave of grenade attacks

BY OUR SALISBURY CORRESPONDENT

A WAVE of grenade attacks and shooting erupted in Zlmhabwe at the weekend—the worst outbreak of violence since the couotry achieved indcpendence five mooths ago.

Police said yesterday that 10 people had heeo injured in five grenade blasts in the townsbips of Seke aod Harare. Six homes belonging to members of Joshua Nkomo's Patriotic Front (PF) party were burned to the ground and factional clashes erupted in the farming centre of Sinoia, 70 miles north-west of Salisbury.

In the past five days, 46 people have heen injured and one killed in political violence generated by the forthcoming local goverument elections and plans to move 17,000 of Mr. Robert Mugabe's ZANLA guerrilles into townshipa around Salisbury.

Tbe violence in Sinoia was the first indication that the latcst uorest had spread beyood Salisbury'a townships. Sinoia lies roughly on the dividing line between areaa controlled by ZANU-PF and PF. Police said the ZANU-PF office there was peppered witb automatic weapon fire on Saturday night, hut there were no iojurles.

The wave of violenca presents a challeoge to Mr. Mugabe's pollcies of national reconciliation following the seven-year war. Rivalries between his followers and those of Mr. Nkomo have existed since the split in Zimbabwean politics wben ZANU, as ZANU-PF was then called, broke away from Mr. Nkomo's laadership.

White nurses in Sallisbury's Andrew Fleming Hospital called off a threatened walk-out yesterday, apparently making peace with the country's Health Minister, Dr. Herbert Ushewokunze.

The ourses had threatened to walk out after Dr. Ushewokunze visited the hospital and criticised the nurses.

Yesterday, Dr. Ushewnkunze said he had cancelled plana to replace the whites with an emergency staff of hlack nurses if the hoycott came off.

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Customs to increase staff in bid to counter textile frauds

BY RHYS DAVID

THE CUSTOMS Investigation Boreau is taking on extra staff and stepping up its activities in a bid to counter fraudulent and illegal importing of textiles.

The exact increase is not being disclosed and it is believed most of those affected will be transferred from other duties. But Mr. Cecil Parkinson, Minister of Trade, announcing the move yesterday in Manchester, said it was hoped the changes would make the bureau a mnch more potent force.

There would, he claimed, be a significant increase in prosecutions which could be brought as a result of the more active role. "We are serving notice on people carrying out frauds that they had hetter watch out," he said.

The move is the Government's response to persistent complaints from the textile industry of goods being ahipped to Britain in excess of quota by a variety of alleged hack-door routes. Goods have in some cases been trans-shipped from Hong Kong to other Far Eastern countries and relabelled with a new country of origin. A number of prosecutions relating to this have been brought by the Hong Kong authorities. The UK industry also maintains that men's suits, made in Romania, are being shipped to the UK with Italian labels of origin.

Mr. Parkinson was in Manchester to introduce the Department of Trade hooklet which gives details of Britain's textile trading situation and explaining the system of controls already in place. The booklet argues that all developed countries are having to come to terms with low-cost textile imports and that there is no accepable or realistic way in which imports cao be cut off or even substantially redoced.

He admitted, however, that the industry still faced severe difficulties. It has lost abont 700,000 jobs since 1950 and 280,000 since 1970. Abont 30,000 jobs were lost in 1979 and a further 35,000 so far this year. Further large job losses were expected.

Mr. Gerald French, the director of the British Clothing Indnstries Association criticised the Government for complacency and said it would he difficult for it to convince the industry of its intentioo to press for a tough successor to the MFA. The brochure, he said, was a shameful attempt to whitewash a patently serious situation.

New credit scheme for exporters

By Eric Short

A NEW scheme desgned to ald UK exporters has heen launched by the Credit and Guarantee Insurance Company. It is simply a guarantee from CGI that would enable the customer to claim compensation from the insurance company in the event of a hreach of contract by the exporter.

The concept of this CGI Guarantee is that the exporter volunteers the guarantee to the customer at the negotiation stage of the potential contract. It effectively counters any suggestion that UK exporters may oot honour their contractual ohligations and promises.

The amount of the guarantee is subject to agreement between the exporter and CGI, hut it needs to be sufficient so as to be meaningful to the customer. Some contracts will need a guarantee equal to the contract value, hut with most transactions a 25 per cent valne should be sufficient.

The premiums are based on the financial and commercial status of the exporter, together with the length of time of the liablity, falling in the range of ½ per cent to 3 per cent of the guarantee.

British whisky exports to Japan

Scotch set to take a nose dive

BY CHARLES SMITH, FAR EAST EDITOR, IN TOKYO

Japanese whisky distillers are starting to see the results of their campaign to deprive Scotch of the privileged position it has long beld in the Japanese liquor market. With figures showing that sales of imported whisky were down 28 per cent in the first six months of the year, it appears Britain's most sncessful export to Japan is abont to plunge. While price increases seem to be the immediate cause of Scotch importers' problems, decliniog demand for hottles of Scotch as gifts and direct competition from local distillers may set the seal on their fate

SCOTCH WHISKY, for several years Britain's most successful export to Japan, may be about to take a nose dive judging by recent figures for sales of imported whiskies in the Japanese wbolesale market.

The figures, released earlier this week, show that sales of imported whisky were dowo 28 per cent in volume terms during the first six months of the year. Sales of "special whisky" produced hy Japanese distillers, meanwhile, grew by 19 per cent.

The figures are closely comparable since Scotch whisky (which accounts for 94 per cent of Japanese wbisky imports) is classified as "special grade whisky" under the Japanese grading system. What they seem to indicate is that the Japanese whisky distillers, led by Suntory, are at last beginning to get some results from their campaign to deprive Scotch of the privileged position it has long held in the Japanese liqnor market.

The reasons why sales began to fall early this year are not hard to discover, though that does not necessarily make them simple. The principle blame would seem to rest with the appreciation of sterling which has been making Scotch much dearer.

For at least five years up to the autumn of 1979, the multitude of large and small import houses which handle scotch in the Japanese market had been steadily cutting their prices. From autumn onwards the process went into reverse with the result that a standard Scotch which cost Y3,200 (£6.10) per hottle in October last year oow cost Y3,800 (£7.25).

Price increases can be regarded as the immediate cause nf Scotch importers' headaches. In the background there would seem to be two other hig problems. One is that standard scotch whiskies have heen steadily losing their popularity as presents to be given away in the two big Japanese gift seasons.

The second problem is that Japanese whisky distillers are beginning to compete head on with Scotch instead of coocentrsting their aim on a slightly lower segment of the market. Suntory, which occupies a massive 72 per ceot of the Japanese whisky market, is thought to be shifting the main focus of its marketing strategy from Suntory Old, a special grade whiskey which sells for about Y800 (£1.52) per bottle less than standard Scotch.

Suntory Reserve, at the moment, sells a comparatively modest 2.2m to 2.3m cases per year compared with last year's Scotch sales of some 3.5m cases. Suotory, bowever, is rumoured to have been given itself three years to boost sales of Reserve to the same level as Scotcb, and the indications are that it may hit this target.

Suntory's special grade whiskies, which are required hy Japanese law to contain a minimum 30 per cent of malt, depend beavily for their quality aod appeal oo the hulk imports of Scotch. Last year Britain's exports of bottled and hulk Scotch to Japan were approximately equal in volume terms. It is because of this heavy reliance that proposals are afoot to ban exports of bulk malt to Japan, but such a move, as seen from a Japanese vantage point, would be unlikely to stop Suntory in its tracks.

Apart from producing its own malt in Japan Suntory could be expected to move directly into the Scotch whisky industry by acquiring existing distillers as a guaranteed source of bulk whisky. Whether such a move would he blocked by the Scotch distillers themselves is another qnestion.

Bottled Scotch whisky curreotly accounts for about 17 per cent by volume of the special grade whisky sold in Japan and for about 7 per cent of the entire whisky market.

In the first six months of 1980 Scotch exports to Japan (bottled and bnlk) were worth £37.4m out of total British exports to Japan of £304m. This was an increase of 30 per cent oo the level of a year earlier, althongh total British exports to Japan rose by only 0.9 per cent during the same period.

Part of the sharp rise in exports early this year was caused by the desire of importers tn anticipate a liquor tax increase which came into force in April. With that special factor out of the way it is hard to be optimistic about the short-term future of Scotch imports.

Tokyo air talks resume

TOKYO—The U.S. resumes talks today on an aviation agreement with Japan amid counter-charges of discrimination.

Mr. Boyd Hight, a deputy assistant Secretary of State, who successfully negotiated an agreement on civil aviation last week between the U.S. and China, leads a nine-member delegation to what are described as "informal" talks.

The negotiations, called at Washington's reqnest, will seek to break a 2½-year stalemate in efforts to correct imbalanees in the U.S.-Japan aviation agreement first signed in 1952.

Japan claims that its national carrier, Japan Air Lines, has been given too few routes to U.S. cities and that the restrictions on en route flights to other nations are discriminatory.

The U.S., in turn, wants Japan to increase access for U.S. airlines to Tokyo's new Narita airport and other Japanese landing points. Washington also claims the Japanese Government has kept trans-Pacific fares artificially high by blocking the expansion of charter flights to Japan.

AP-DJ

Howell on S. America mission

By Hugh O'Shaughnessy

MR. DAVID HOWELL, the Secretary of State for Energy, leaves for Mexico and Venezuela today having set himself a multiplicity of diplomatic and trade tasks to carry out in the next nine days.

He will he trying to sell the technological expertise Britain has built up in the North Sea to the two leading Latin American oil prodncers, expertise he claims has not yet been marketed vigorously enough.

Before his departure he pledged that if either the Mexican or Venezuelan State oil concerns expressed interest in closer association with the British National Oil Corporation the latter would not be prevented from spresding its wings abroad. But this would he subject to the Government's usual financial constraints, he added.

In both countries he will be carrying the message that Britain regards itself more as a consumer than a producer of oil and so devoutly hopes that something can be done to prevent any repetition of the price rise horrors of 1979.

As more of a consumer than a prodncer, Britain is interested in seeing more oil coming on the world market. But while making this point, the Minister will try not to give the impression that Britain wants Mexico to pump more oil out of its continuously growing reserves or is chivvying Venezuela to get down quickly to the massive exploitation of its Orinoco tar belt, one of the world's biggest and most difficult remaining nil reservoirs.

On his way back to London he will stop in Washington for talks with Mr. Charles Duncan his U.S. opposite number, where be will emphasise that the Western industrialised nations cannot wait to see the U.S. appetite for imported energy moderate.

Japan and Mexico in steel deals

By William Chislett in Mexico City

MEXICO and Japan have reached agreement on constructing two steel mill joint ventures worth together 10.2bn pesos (£185m). Japan hopes that this will pave the way for a 200,000 b/d increase in its oil supply from Mexico to a total of 300,000 h/d.

Discussions on the steel mills, which will he sited at Lazaro Cardenas on Mexico's Pacific coast, where a major Mexican state steel complex is already located, were finalised last month, bnt no official statement has yet been made.

The agreement was made st a Government-to-Government level, although the Japanese participation is from the private sector, because Japan's export-Import Bank and the OECF, the country's agency for overseas development, will both be financially involved.

The Eximbank will provide financing for an unspecified amount and the OECF will have some direct capital participation.

Sumitomo and Kobe Steel will form : joint ventures with Nacional Financiera, the Mexican Government's development hank, and with Sidermex, the Mexican holding company for the state steel sector, for a pipe mill and a forging and casting mill.

In hoth cases Mexico will hold 51 per cent of the capital and the Japanese concerns 49 per cent.

Investment for Sumitomo's large diameter tube mill is 3.7bn pesos, and it will have an annual production of 290,000 tonnes. The tube will he made for Pemex, the Mexican state oil monopoly, which is currently importing large quantities of pipe to enable it to push ahead with its ambitious expansion programme.

The Kobe mill investment ia 6.5bn pesoa and it will produce 64,000 tonnes a year.

France in drive to boost China trade

BY ROBERT MAUTHNER IN PARIS

M. JEAN-FRANCOIS Deniau, the French Trade Minister, arrived in Peking yesterday to atudy ways of stepping up trade between France and China, in preparation for French President Giscard d'Estaing's visit to China October 15-18.

In spite of the efforts that have been made by the French to exploit the Chinese market, the results have been disappointing. Trade between France and China totalled no more than FFr 2.8bn (£66m) last year, giving France a small surplus of only $13m.

During the first six months of 1980, when total Franco-Chinese trade amounted to some $330m, the French surplus was converted into a deficit of $110m.

Currently, France is only China's sixth most important trading psrtner, behind the U.S., Hong Kong, Japan, West Germany and Britain, and only two major contracts are at present under negotiation—the construction by French companies of a hydro-electric power station and the equipment by France of a non-ferrons metals mine.

However over the past 12 months, industrial contracts totalling some FFrs 2bn were concluded by French companies, the most important of which were for the supply of an electrical power-station, helicopters, and electronic equipment.

—In addition the signature by the two French oil companies, Elf-Aquitaine and CFP (Total), of exploration contracts in the China Sea could well lead to advantageous exploitation agreemants, if oil is found in large enough quantities.

A project for the construction by Renault of three truck and diesel engine plants, with an annual capacity of 10,000 vehicles and 15,000 engines, is also under discussion.

Lada at top of Danish market

By Hilary Barnes in Copenhagen

PRICE-CUTTING has helped the Soviet-built Lada car become the top-selling car in Denmark for the month of August. Although only 538 units were sold, this represented 12 per cent of all sales, and was achieved by a DKr 5,000 (£380) price cut. For the first seven months, Lada, the Russian-version of the Fiat, sold 3,193 cars, or 6 per cent of total sales.

However, it was the Italian-built Fiat 127 which remained the best selling car so far this year, with an 18 per cent market share.

UK NEWS

Thoughts from abroad—on another dwindling export market

BY NICHOLAS COLCHESTER

OVERSEAS salea are no longer a joy-ride for Mr. Peter Wilkinson, owóer-director of Wilkinson Photographic Prodocls and the embodiment of a British inventor-entreprcneur.

His modest stand at Photokina, the huge photographic fair In Cologne, is dominated by his latest brainchild, an antomated version of the ingenious Wilkinson colour processor. Bnt last Friday o crowd of interested inquirers was sadly lackiog.

It was not always so. Four yeors ago, when the ponnd sterling was still on its back and monetarism was o medicine prescribed in small doses by the IMF, Mr. Wilkinson was fending off orders be could not fill.

German photographers peered incredulously ot dark room eqnipment half the price of that offered by the competition. Foreign purchasers even stuffed dollar bills into Wilkinson's breast pocket to win themselves a dellvery date.

At that time Mr. Wilkinson seemed to personify unrealised British export potential. A former presidenl of the Royal Photographic Society, he offered photographers a simple but effective film processor produced in cottage-industry fashion by o workforce of 25 people.

He chose not to expand prodnction because he had a small and happy team, o pleasant house and a sailing boat—and that was all he wanted.

Today, Mr. Wilkinson has a sad and familiar tale to tell.

"Inflation in the UK and the strong pound have pnshed my D-Mark prices up by obout 40 per cent in one year. That's done an awful lot to erode the differential hetween me and my competitors."

He still admits to a small price advantage but maintains that: "Where we would normally sell 60-70 per cent of our prodnction abroad, today we only sell 10 per cent."

But where an expansionist Mr. Wilkinson in 1976 would have been sqneezing prodnctivity anxiously out of his workforce, in 1980 the real Mr. Wilkinson is not.

He has merely substituted British orders for his export sales, and is keeping fewer British customers waiting. He confirms disarmingly that he still employs 25 people.

Despite the twin handicaps of British inflation and the strength of the pound, Mr. Wilkinson still gets satisfaction from his export efforts.

His small company in Chessington recently supplied a tailor-made processor to develop pictures from the Earth Resources satellite project in the U.S.

It also received a Diploma of Excellence from the Soviet Union—an improbable testimony which Mr. Wilkinson decided not to hang up in his stand at the Photokina.

Plans to cut air fares to Malaysia

FARES between London and Kuala Lumpur will be cut next month, if the UK and Malaysian Governments approve plans hy British Airways and Malaysian Airlines System.

The airlines are proposing a three-level Advanced Purchase Excursion fare from October 1 witb cuts of up to £60 for a return ticket during the off-peak period.

The proposed fares are: Octoher 1 to November 30, £244 slogle and £429 return; December I to Jsnuary 31, £259 single, £459 return; and February 1-June 15, next year, £235 single, £399 return.

● Further details of the cheap return fares between the UK and West Germany planned by Luftbansa and British Airways show that the "Fly 'n Save" return rate between Loodon ond Bremen will be £76 (against the normal economy return of £144).

Other rates (normal economy In brackets) Include: Cologne/Dusseldorf £63 (£120); Frankfurt £79 (£150), with a Manchester fare of £101.50 (£193); Hamburg/Hanover £84.50 (£160); Munlch £100.50 (£191); Nuremberg £89 (£169); and Stuttgart £86 (£163).

The fare hecome effective on November 1. Passengers must stay for at least six nights with a maximum of one month.

● British Caledonlan Airways is spending up to £100,000 on a nationwlde publicity campaign to promote its range of cbeap fares to International destinations.

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● Logainair, the Scottish airline, is withdrawing flights between Edinburgh and Inverness from October 31 because of falling traffic. Personnel cuts will he kept to a minimum.

The Inverness-Wick-Kirkwall service will continue as normal. Loganair charter operations will continue to expand, and the air ambulance service is not affected.

National executive set up to direct reactor project

BY DAVID FISHLOCK, SCIENCE EDITOR

The Nuclear Industry Group, which held its first meeting last week, consists of four top executives who plan to meet just ahead of the periodic pressurised water reactor progress meeting planned by the Department of Energy under tbe chairmansbip of Mr. Norman Lamont, Minister responsible for the nuclear iodustry.

The four are Mr. Fred Bonner, deputy chairman of the Central Electricity Generating Board, wbo is cbairman, Dr. Ian Preston, director of tbe CEGB's Barnwood engineering centre, Dr. Ned Franklin, chairman of the Nuclear Power Company, and Dr. Walter Marsball, deputy cbairman of the UK Atomic Energy Authority.

Sir John Hill, chairman of the Atomic Fnergy Authority, said yesterday that he expected the public inquiry into the siting of Britain's first 1,150 mW PWR to take place in 1982.

The national plan is to win the approval of the Government's nuclear inspectors by mid-summer 1982, and almost simultaneously for the Government to announce a public inquiry into the CEGB's application for planning permission to build it at Sizewell in Essex.

In this way it is hoped that the inquiry might be over before the end of 1982, in time for construction to start early in 1983 if approval is given.

Sir John, presenting the Atomic Energy Authority's annual report, said the British nuclear power programme, although hy some standards a modest one, was making better progress than many Western nations.

At the Venice Economic Summit this summer Western leaders had committed themselves once again to reducing dependence npon oil.

"This is essential if we are to avoid further world recession brought on, like the present one, by huge increases in oil prices," Sir John said.

It was a "great pity that opposition by determined groups of people in many countries exploiting ignorance and fear" had slowed down the introduction and development of nuclear power.

The Atomic Energy Authorlty plans to shut down its prototype advanced gas-cooled reactor at Windscale early next year. It has operated for 18 years with an availobility of 82 per cent, generating 3,500m units of electricity.

The anthorlty plans majer safety experiments on the 33 MW reactor before it is finally shut. It wants to demonstrate that the fuel will operate safely under conditions suhstantially more onerous than it would be expected to reach in service.

UK AEA Annual Report 1979-80, pp 76, HMSO, £2.

EEC backs £48m mine expansion

BY RAY PERMAN, SCOTTISH CORRESPONDENT

THE NATIONAL Coal Board is to horrow DM 220m (£48m) from the European Coal nad Steel Community to finance development work at the Longannet colliery complex In Scotland and purchase of underground plant and equipment.

The loan is the first to he agreed by the community under an arrangement announced in Marcb to stimulate the mining industry, which is seen hy the European Commission as having a growing role to play in meeting Europe's energy needs.

Mr. Christopber Tugendhat, EEC Commissioner for Bndget and Finance, who announced the loan, said in Edinburgh yesterday that by the end of the century, coal production in the Comunity would have to rise by 25 per cent if energy targets are to be achieved.

The UK now produces half the Community's coal.

Of the loan, DM 100m (£22m) will be used to exploit new reserves and to extend the surface plant at Longannet, a series of mines which serve a major coal-fired power station.

The work will extend the life of the pits and reduce the cost of production hy £1 per tonne, meaning a saving of £2.5m a year at present prices.

The interest rate on the loan is 8⅜ per cent, with an interest relief grant of £1m to cover part of the money for the five-year period of construction at Longannet.

But under an agreement with Britain, by which the Treasury will cover the exchange risks, the Coal Board will pay a rate of ¼ per cent below the National Loan Fund Rate.

Brickworks plan referred to inquiry

A £15m development by the London Brick Company to build a hrickworks at Whittlesey, Cambs, is to be referred to a public inquiry.

Fenland District Council refused to handle the planning applications because of the recent controversy over chemical pollution from brickyard chimneys in Bedfordshire.

The project was designed to create more than 100 jobs at Whittlesey, seven miles from Peterborough.

However, Mr. Roy Sidwell, the council's chief planning officer, said yesterday: "In spite of advantages, in employment and environmental terms to be gained by approving the present application, the atmospheric pollution is a problem of international significance and should therefore he determined at national level.

"We are therefore asking Cambridgeshire county council to ask the Secretary of State to call in the application, or, failing that, to impose stringent conditions with a view to precipitating a public inquiry."

The decision is a further blow to the London Brick Company, whicb produces 40 per cent of Britain's hricks.

A similar application for a £60m development in Bedfordshire was granted by the county council, but with stringent conditions over installation of filtration equipment to remove all polluting chemicals from chimney emissions.

The company says it can only remove up to 90 per cent of the pollution.

Tbe developments are closely monitored by Scandinavian countries.

Twice the power in redesigned batteries

AN INVENTION enabling alkaline batteries to give twice as much power for the same weight as existing designs is going into mass production by Inco, the nickel group.

Scientists at Inco's research and development centre in Birmingham have perfected a high-performance nickel electrode called the Microfoil. It is being made available to battery manufacturers.

Alkaline batteries are used for electric vehicles, ships, industrial vehicles such as fork lift trucks, and for storing electricity at factories for emergency power. Current designs are heavier than lead-acid hatteries but they are more robust and last longer.

Already European and U.S. car makers are evaluating the Inco system with a view to using it for future electric passenger car designs.

The new nickel electrodes recently have been put into mass prodnction by MPD Technology of Birmingham, an Inco company.

Each electrode is a multilayer sandwich of sheets of perforated nickel foil only four microns thick. The foil is coated with active nickel hydroxide.

The company intends to reveal details of the power system at the International Power Sources symposium in Brighton this week.

Inventors' show

A TWO-WEEK exhibition of British inventions and technology, with displays by 52 companies, was opened yesterday at the London department store of Simpson (Piccadilly).

Swiss move nearer to £250m Rapier order

BY OUR AEROSPACE CORRESPONDENT

THE loog-awaited Swiss Army deal for British Aerospace Rapier anti-aircraft missiles moved a step closer yesterday, with a recommendation from the military committee of the Lower House of the Swiss Parliament in favour of the weapon system.

This decision followed a successful Rapier demonstration to Swiss MPs and the full Federal Council in Switzerland last week. The deal, if all goes well, could he worth up to £250m for British Aerospace.

The next step is a debate on tbe procurement hy the Lower House of the Swiss Parliament this autumn, while the Upper House will debate the matter in early December.

BAe said yesterday: "If all goes well, the order should be signed before the end of the year."

● Britannla Airways, the independent airline based at Luton, is to spend $28m buying 14 U.S. General Electric CF6-80A bigh-thrust jet engines for its planned fleet of Boeing 767 semi-wide-hodied jet airliners.

The airline has already ordered two of the twin-engined 767s for delivery in 1984.

4,500 Welsh jobs lost in a month

MORE THAN 4,500 redundancies were declared in Wales last month—double the number for August last year—accordiog to figures issued by the Department of Employment yesterday.

They briog to 44,000 the total of notified Welsh redundancies so far this year, compared with 16,000 in the first eight months of 1979.

Jobs lost as a result of the drastic cutbacks in the Welsh steel industry account for about half the declared redundancies.

The major steelworks of Shotton in North Wales and Llanwern and Port Talhot in South Wales are shedding over 20,000 jobs betweeo them. The motor componeots and textiles sectors have also beeo promineot among the industries cutting back employment.

At the same time, a significant number of the notified redundancies, notably in steel, have still to work their way through into the uoemploymeot figures. The August Welsh unemployment total was 122,588 or tt.3 per cent (22,000 school-leavers).

Italian company to use Oxford building method

BY ROBIN PAULEY

OXFORD REGIONAL health authority has signed a deal with an Italian construclion company which will allow it to use the "Oxford Method" of hospital hullding construction in 85 couotries.

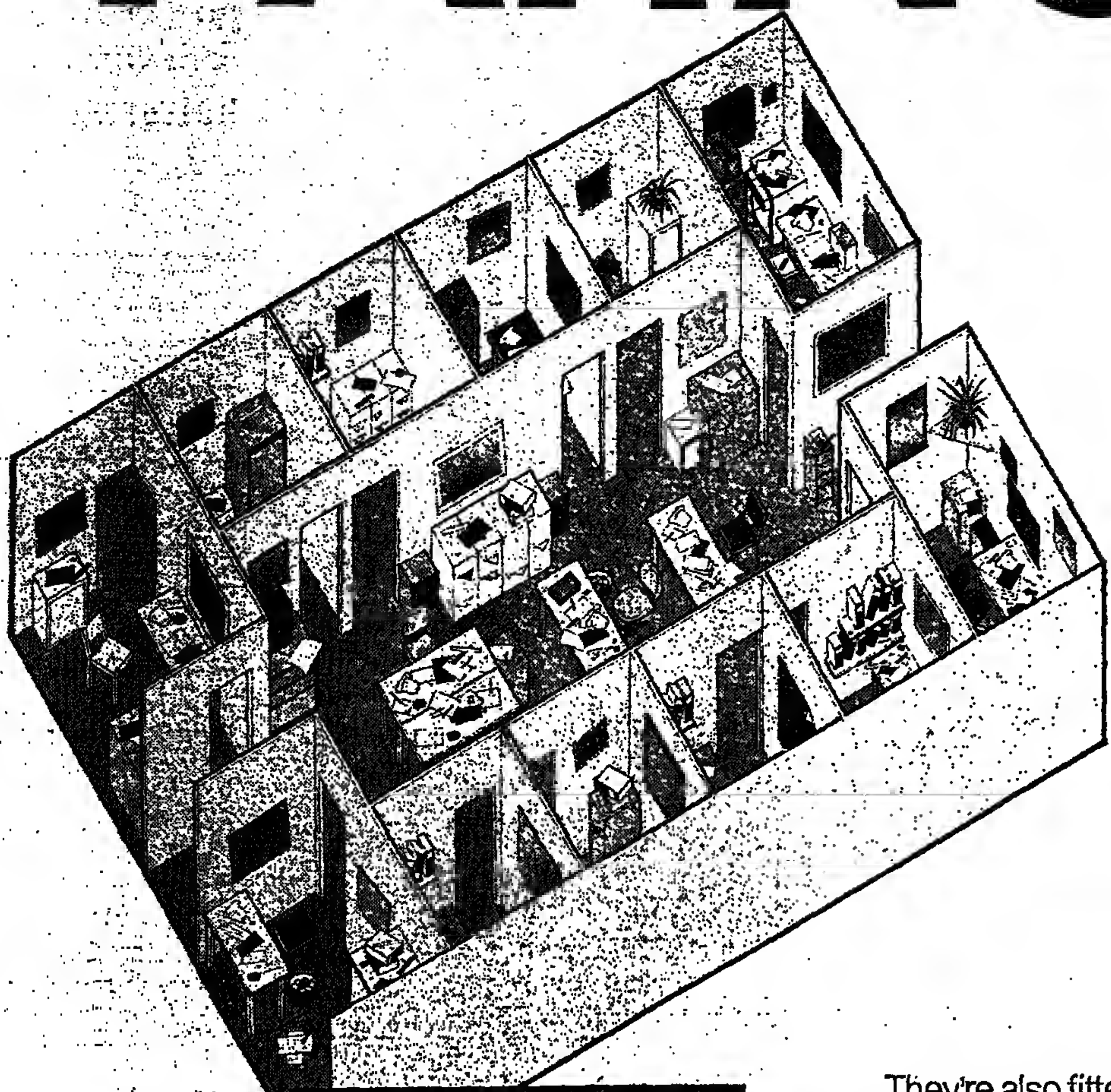
The deal was agreed with INSO SpA Sistemi per le Infrastruclure Sociali, an international company based in Florence.

The company will pay tbe Oxford health authority a licence fee of £20,000 a year plus royalties of 2 per cent of the tolal cost of buildings constructed. Royalties on a new £10m hospital would therefore add £200,000 to tbe health athorlty's fuods.

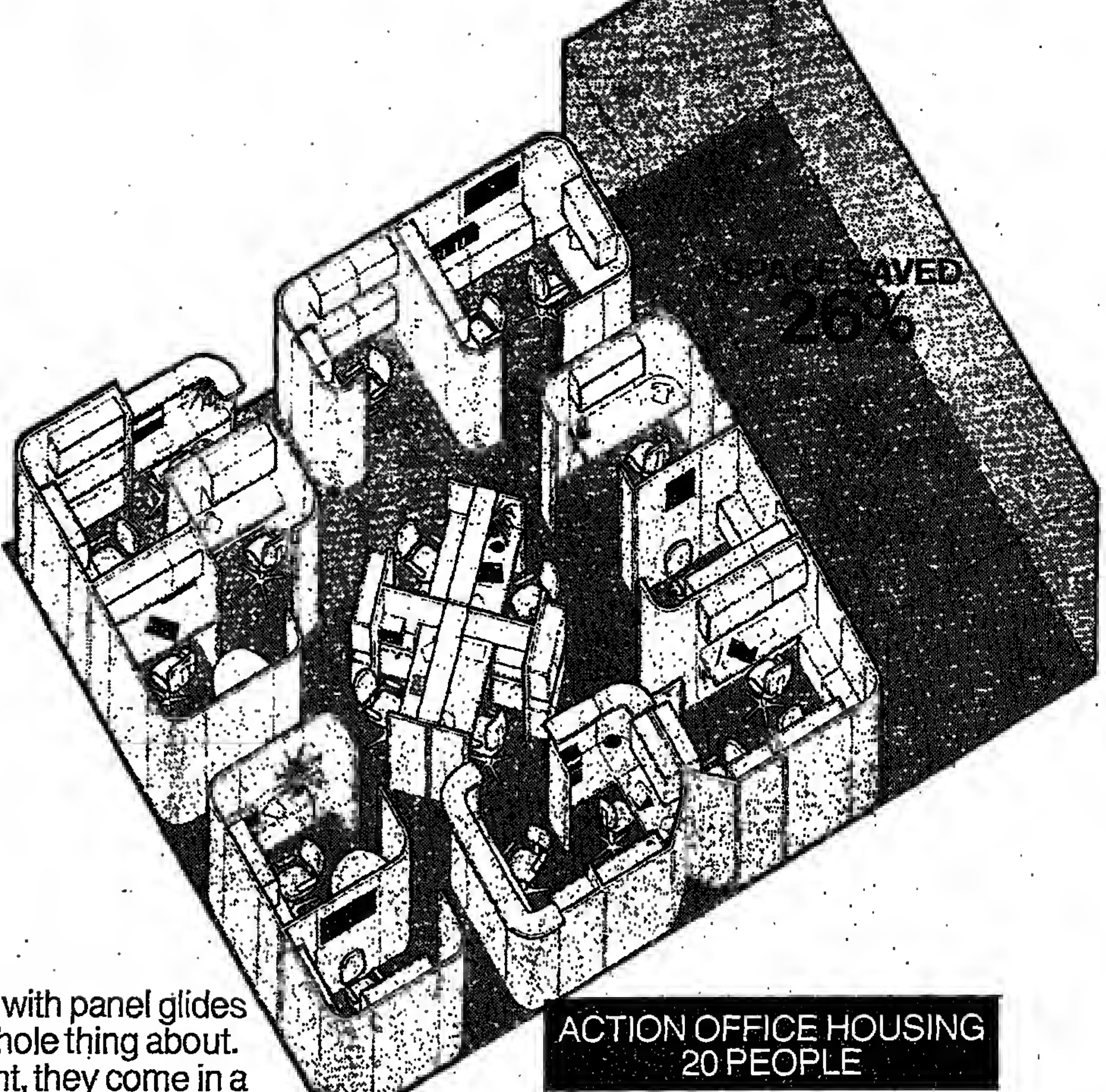
INSO will have exclsive right to the Oxford Method in Italy, Greece and Yugoslavia, aod a first optioo in other countries in Western and Eastern Europe, Africa, the Middle and Far East. The regional health authority will provide drawiogs, design data, production end technical information.

The Oxford Method is a design concept developed hy the health authority for desigoing and huildiog hospitals using a steel frame and standardised components which can he assembled to meet virtually any required specificatioo.

HOW TO AVOID PAYING RENT.



CONVENTIONAL OFFICE HOUSING 20 PEOPLE



ACTION OFFICE HOUSING 20 PEOPLE

To prove that you can do just that, we commissioned an architect to house twenty people comfortably in a conventional office space of sixteen hundred square feet.

When he'd done, we set aside his plan and asked him to do the same thing using only items of 'Action Office' equipment.

A quick glance at the two drawings reveals the results of his impartial endeavours, but let's examine more closely the system which allows this extraordinary saving of space and therefore rent.

A SQUEEZE, NEVER.

The normal way to fit yet more people into the same space is to deny them privacy and opt for open plan.

Everyone knows about that and if you can work in it, fine.

But 'Action Office' provides a unique alternative. It takes up less space than conventional office accommodation but furnishes as much room as open plan.

Not overlooked, overheard, and overcrowded room but intimate working areas, all with just the right balance between privacy and accessibility. This is due entirely to the design and arrangement of the fundamental elements involved.

SMALL, MEDIUM, OR: THAT MUST BE THE MANAGING DIRECTOR'S.

Not to put too fine a point on it, these elements are many and varied.

Essentially though, they're a series of beautifully constructed free standing panels that elegantly and acoustically dissect your extremely valuable floor space.

They come big, small, open or glazed, with ingenious connectors which hold the assembly totally rigid and enable you to add and subtract at will.

They're also fitted with panel glides so you can move the whole thing about.

But most important, they come in a range of finishes to satisfy everyone. Harold in the stores. Robert in Exports. Even you.

FRAMEWORK DOES NOT AN OFFICE MAKE.

By now you should have mentally cleared and dissected your existing office, so spend a minute imagining the rest of the 'Action Office' furniture.

Traditional roll top covers for ultimate security. Countercaps situated just above your regular work height, which allow for secondary transactions without disturbing primary ones. Open shelves, closed shelves, lockable shelves.

A file in every conceivable shape for every conceivable use. Special stands for computer readouts.

Blackboards, display components and a sign system. There's even a crafty way of keeping electric and GPO wires hidden.

All this without forgetting one crucial factor. Individuality.

YOU CAN'T BEAT THE SYSTEM.

Although to some extent 'Action Office' is equatable with standardisation, it is in no way equatable with the mundane.

Quite the reverse, because the lavish number of items available inspire people to establish their own area just the way they want it, whilst your overall corporate feel remains totally intact.

Herman Miller, the inventors and manufacturers of this system have been planning (cost included) and installing it in Europe and the States for more than ten years.

As a further introduction to this country a series of seminars are planned. And a computer programme will be launched there, for those people wishing to evaluate the return on investment of installing 'Action Office' in their own company.

If you'd like to attend one of these events, or simply receive more information on 'Action Office', please tick the relevant box.

Avoid this simple act and you'll never avoid paying rent.

☐ Please send me more information on 'Action Office'.
☐ Please send me details of the forthcoming series of seminars demonstrating 'Action Office' plus a free ticket to attend.

Name ____________________

Address ____________________

Herman Miller Ltd., 149 Tottenham Court Road, London W1P 0JA. Telephone: 01-388 7331.

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HERMAN MILLER ALSO HAS OFFICES IN FRANCE, BELGIUM, NETHERLANDS, GERMANY, SWITZERLAND AND 13 OFFICES IN THE U.S.A. AND CANADA.

How a split in the Rothschild family developed

Richard Lambert looks at differences over use of the family name

THE SPLIT between the two branches of the UK Rothschild family, which became public at yesterday's annual meeting of Rothschild Investment Trust, has been developing over a period of several years.

In essence, it stems from the relationship between two cousins, Mr. Evelyn de Rothschild and Mr. Jacob Rothschild, and their different views about the appropriate use of one of the family's most valuable assets—its name.

Mr. Evelyn de Rothschild, 49, is chairman of the merchant bank, N. M. Rothschild and Sons (NMR), a private company). Mr. Jacob Rothschild, 44, is chairman of the publicly quoted Rothschild Investment Trust.

Mr. Jacob Rothschild has been involved closely in the affairs of the bank for about 20 years.

Although never formally its chairman, be was without question its leading light as far as its public image was concerned about 1975, when be served as chairman of its executive committee.

During that period, the bank's development reflected his somewhat abrasive and entreprenenrial character. In particular, it expanded its corcerned from around 1967 to porate finance activities and moved into the international sphere by investing in consortium banks and buildiog up U.S. interests.

Mr. Evelyn was working at the bank during those years but in the public eye, at least, he played a subsidiary role. This was despite the fact that he was—and is—much the largest shareholder in the bank's holding company, Rothschilds Continuation Ltd. (R.C.L.).

In the mid-1970s, however, the balance of power changed. Lord Victor Rothschild, Mr. Jacob's father, became bank chairman. After only a year, be passed the chair on to Mr. Evelyn.

Imperceptibly, the character of NMR shifted back to that of a traditional City merchant bank. It remained very profitable, thanks in particular to its strong position in the bullion market. But it seldom made the front pages.

Mr. Jacob increasingly shifted bis energies in the directioo of the quoted company, Rothschild Investment Trust (RIT). This had been transformed under his management duriog the early 1970s from a rather boring investment trust into a financial vehicle which took significant stakes in all sortso f unconventional investmants—like stock jobbers Wedd Durlacher and Sotheby, the auctioneer.

The trust took a knock during the financial crash of 1974-75, but since its record has been good. Since 1977, its net assets bave risen from £40m to around £100m. For comparison, the valuation put on Rothschilds Continuation by RIT's proposed share disposal is around £60m.

However, the expansion of RIT was viewed with concern by some executives of the bank. They felt it wonld blur the public's perception of the bank's activities. In its report and accouots for 1978-79, publisbed last summer, RIT said it might consider increasing its shareholding in Rothschilds Continuation, which stood at 11.4 per cent. But, a series uf events in tbe following months made such a closing of ranks look increasingly unlikely.

One such development was the purchase by Eagle Star of a 6.4 per cent sharebolding in Rothschilds Continuation. This was a very large stake for a non-family investor, and it was interpreted as something of a snub in the RIT camp. Mr. Evelyn is on the board of Eagle Star.

An even more significant development came in August of last year, when Reliance, the U.S. insurance group, announced to a surprised world that it was going to pay £16m for a stake of just over 20 per ceot in RIT. This move bad tbe full support of the UK group but it was not greeted with enthusiasm at the bank.

Mr. Saul Steinberg, bead of Reliance has a colourful business history, and he was to become a director of RIT. Some bankers winced discreetly at snch abbreviated headlines as "Reliance to buy stake in Rothschild." In the autumn, RIT moved further into the financial services market by buying the Target units trust group and life company helped by Reliance which took a 40 per cent stake in this operation.

The ultimate parting of the ways grew closer. In May this year, a low-key press release announced that the bank and RIT had beeo bolding discussions for several months to determine their "appropriata" relationship in the future.

Mr. Evelyn resigned from the RIT Board, along with Mr. Kenneth Dick, a non-executive director of NMR. Existing financial advisory arrangements between the two companies were to be discontinned.

During the last few months, the relationship seems to have deteriorated rapidly. In August, RIT floated a £12m Eurosterling bond—and the banking world noted that NMR was not the manager — or even an underwriter—of the issue.

Over at the bank, hostility to the link with RIT seems to bave been increased by the fact that the issue was launched under the name of Rothschild Investment Holdings.

Although the bank bas no significant stake in RIT it still has powers under RIT's articles of association to insist that the name RIT should be changed to one which did not inclnde the word Rothschild if there were no longer common directors.

By stating its belief that Mr. Jacob should cease to be a director of NMR and RCL in tbe near future, the main sharebolders in the bank have now thrown down the gauntlet.

Bank calls for action to reduce borrowing

By David Marsh

PUBLIC sector borowing must be cut substantially to ease pressures on companies' profitability and pave the way for lower unemployment, according to merchant bank Morgan Grenfell in its monetary review published today.

The bank implicitly criticises the Government for not sticking to a tough enough monetary stance and calls for "rapid action" on fiscal policy to cut borrowing.

In another economic commentary published this morning, stockbrokers Laing and Cruickshank forecast that the public sector borrowing requirement this year will be about £2bn above the official target of £10.6bn and could rise to £12bn in 1981-82.

Morgan Grenfell says the Government has not yet adopted a budgetary policy that will provide a fiscal *means* to *achieve its monetary* end.

"The cost of this discrepancy will be a continuing destruction of profits and employment."

Morgan Grenfell says the size of Government borrowing limits the access of other borrowers to the capital markets.

"For this reason, a high PSBR is deflationary in current circumstances."

The bank points out that the apparent restrictiveness of official monetary policy has been considerably mitigated both by Bank of England belp for the banking system to relieve liquidity pressures and by smoothing intervention on the exchange markets.

Following the sharp rise in money supply in the summer, Laing and Cruicksbank says there is no fundamental evidence that monetary growth will be brought under control in the near future.

It says companies are being forced to borrow by the recession and the high exchange rate, *and consumers are under* no pressure to reduce their outstanding debts.

Call to support accounting standards

FINANCIAL TIMES
DEVELOPING THE ANNUAL COMPANY REPORT
CONFERENCE

Michael Lafferty reports on a Financial Times seminar on annual reports

INTERNATIONAL business interests were called on yesterday to give more support to the work of the International Accounting Standards Committee.

Mr. Hans Burggraaff, committee chairman, said at a Financial Times seminar on multinational companies annual reports that if business wanted to avoid conflicting standards it should come out loud and clear in favour of the committee and multinational companies sbould say so in their annual report.

"If prominent enterprises al over the world would do this, compliance with international accounting standards would become a decent thing to do for every self-respecting businessman."

The present limited degree of compliance was of great concern to the committee's board and was under active consideration.

The International Accounting Standards Committee is increasing its liaison with natiooal accounting standard setting bodies: it is seeking involvement of other international organisations; it has an opportunity to make itseif heard in the working groups of the United Nations and the Organisation of Economic Co-operation and Development: it has offered its co-operation to the United Nations and the organisation, and expressed its willingness to work out an arrangement to joint efforts.

Mr. John Grenside, senior partner of the UK and international accounting firm of Peat, Marwick Mitchell, said stock exchanges should do more to improve reporting standards of large companies.

He said: "There is a need for a firmer stance by stock excbanges throughout the world in refusing listings to companies whose standards of financial reporting are inaoequate."

However, Mr. Grenside rejected a proposal in the recent Financial Times World Survey of Annual Reports that international accounting firms—as part of a joint programme of action involving multinational companies and the standards committee—should refuse to allow tbeir names to be associated without qualification with financial statements around the world which do not meet agreed minimum standards.

This was "asking for the moon," he said.

International accounting firms must have appropriate outside authority to support and enforce such action. Mr. Grenside said multinational companies sbould do more on a voluntary basis to improve reporting standards.

It would he helpful if annual reports could indicate whose accounting principles were being applied in their financial statements.

The seminar titled "Developing the Annual Company Report was chaired by Mr. Tom Watts, chairma nof the UK's Accounting Standards Committee.. It dealt with many of the Issues raised in the world survey of annual reports.

It began with a joint presentation of the survey aod its findings by authors Michael Lafferty, Financial Times banking and accounting correspondent, and David Cairns, technical partoer in the London accounting firm Stoy Hayward.

In a separate presentation Mr. Cairns said tbere was a strong case for multinational companies and international accounting firms agreeing on a minimum content for audited financial statements.

The Financial Times survey is based on the belief that annual reports should be general purpose documents useful to a variety of different interest groups.

The philosophy which underlies that approach was outlined at the seminar by Professor Edward Stamp, of the International Centre for Research and Accounting at the University of Lancaster.

"The accountability of a large enterprise to a range of users . . . is based upon the belief that such organisations have become such an integral component of modern society that they cannot escape their obligations to society as a whole."

The philosophy did not yet commend general acceptance.

Delegates also beard presentations from the Organisation for Ecooomic Co-operation and Development and the United Nations on their plans to improva reporting standards of multioational companies.

Strong £ aids trade surplus

BY DAVID MARSH

BRITAIN bas registered a strong surplus on the current account of its balance of payments during the past three mooths, in contrast to the quarterly deficits recorded earlier in the year.

The surplus between June aod August amounted to £554m, seasonally adjusted compared with a deficit of £118m in March to May. The overall shortfall during the first six months of £230m bas been more than cancelled out by the surplns of £474m during the past two months.

Invisible earnings for the year to date bave been revised upwards. The invisible surplus during the last few months is estimated to bave been running at around £75m a month, up from the £50m a month estimate made in August.

But the major change bas been on the visible trade account, where a surplns of £327m bas been recorded during the last three months against a deficit of £430m during March to May. Exports have been fairly buoyant but imports have dropped, owing to the recession.

Britain registered a surplus of £82m in oil trade and £245m in non-oil trade during June to August. This compared with deficits of £4m and £426m respectively during tha previous three months.

There bas baen a sharp improvement of 3 per cent in the terms of trade during the last three months—partly because of the strong pound. Export volume bas been flat but its value has risen by 2½ per cent. Import volume has fallen by 2¼ per cent and its valne by ½ per cent.

BALANCE OF TRADE

		Exports £m seasonally adjusted	Imports £m seasonally adjusted	Exports Volume seasonally adjusted 1975=100	Imports Volume seasonally adjusted 1975=100	Terms of trade *Unadjusted 1975=100	Oil balance £m
1978	1st	8,390	9,023	120.1	113.6	105.0	−625
	2nd	8,676	8,862	121.0	109.1	104.5	−419
	3rd	8,933	9,401	122.5	115.0	106.1	−497
	4th	9,072	9,278	122.5	112.9	106.5	−458
1979	1st	8,373	9,961	109.0	116.9	107.0	−235
	2nd	10,658	11,114	135.3	128.9	106.4	−229
	3rd	10,641	11,134	129.8	128.1	106.8	−158
	4th	11,017	11,762	129.3	128.9	103.7	−157
1980	1st	11,726	12,558	131.3	126.5	100.7	−126
	2nd	11,813	12,114	129.2	124.8	102.4	− 29
	June	3,970	3,967	130.3	125.3	103.4	− 30
	July	4,032	3,771	129.8	118.5	103.8	+102
	August	3,958	3,895	127.1	120.9	105.2	+ 10

* Ratio of export prices to import prices

Source: Department of Trade

هكذا من الأصل

Financial Times reporters examine the likely effects of the national dock strike scheduled to start Monday

Overcapacity has produced 'fierce ports competition'

BY OUR SHIPPING CORRESPONDENT

THERE are more than 100 ports in the UK where the Customs and Excise men collect statistics, and dozens more wbarves along most estuaries wbere ships can dock and unload their cargoes.

The National Ports Council recently calculated that Britain's ports could bandle around 1bn tonnes of cargo per year, but in fact they handle only around 400m tonnes, with tbe result that there is considerable nvercapacity and competition for business is very fierce. Tbis fact should not be overlooked in any assessment of the effectiveness of a national docks strike.

The trade of the older ports, such as London, Liverpool and Bristol has been declining for years. While newer ports sucb as Felixstowe and Dover have been flourishing. The total numbers employed in the industry have fallen from 130,000 in 1966 to less than 60,000 now, and are still falling.

Britain's entry into the Common Market, the switch from conventional break bulk cargoes to containers, and the advent of roll-on/roll-off ferry services to Europe, has led to a dramatic shift in the balance of power in the ports industry over the past decade.

A number of things bave been happening. First, there has been a drift of traffic away from the West coast ports to the South and East coast ports, reflecting the growth of Britain's trade with Europe. Second, there has been a dramatic growth in traffic of roll-on/roll-off ferry ports, Dover being the leading example. Third, the contalner revolution bas spawned new ports, sucb as Felixstowe, wbich have been able to capitalise on their freedom from the historical labour problems of places like London and Liverpool and consequently capture a large part of the rowth in the traffic.

Fourth, the discovery of North Sea oil has led to the emergence of a new generation of oil terminals in places such as Flotta and Sullom Voe, whicb will soon overtake terminals like Milford Haven and Southampton, in importance.

Against this background it is possible to split Britain's ports into two groups, those which are profitable and those which are virtually bankrupt. It is the latter that are at the roo of the current dispute.

London, Liverpool and Bristol are losing money beavily and are in desperate financial trouble. Southampton and Hull are also losing money, but they are part of the British Transport Docks Board which is profitable overall, and can absorb the losses of these two ports.

The most profitable ports tend to be along the South and East coasts, and generally employ relatively few dockers. This is an important factor in their success, since unlike London and Liverpool, they have not had to carry large numbers of surplus dockers on their payrolls.

Britain's ports are owned by a variety of bodies and this has compounded their problems. The biggest undertaking is the Britisb Transport Docks Board, which is nationalised and owns 19 ports around the country, giving it just under a quarter of UK port traffic. Being profitable it has been able to finance its investment programme.

There are some municipally owned ports, of which Bristol is tbe best example. It has been losing money for several years but up to now the local ratepayers have been willing to foot the bill. There are also some privately owned ports of wbich Felixstowe (part of European Ferries) is the best example.

However, the two major ports, the Port or London Authority and the Mersey Docks and Harbour Company, are respectively a trust port and a statutory company. They do not have any lender of last resort—such as the ratepayers — to finance losses.

These two ports will be the worst affected by any national docks strike and the government will almost certainly bave to step in and rescue them if there is a prolonged dispute.

Ministers prepared for emergency action

By Richard Evans, Lobby Editor

SENIOR Ministers were keeping in touch with docks developments yesterday but will await events before deciding if any action is necessary.

The Contingency Unit, operating from tbe Cabinet office, would be responsible for co-ordinating Government measures should the strike take place and supplies be endangered.

The Queen would be advised through the Privy Council if tbe Cabinet decided a State of Emergency was needed.

Tbe essential criteria would be the threat to the maintenance of supplies and services essential to the life of the community.

Once the Queen signed a proclamation, it would become effective at midnight on that day but Parliament would have to be recalled within five days to be told tbat a State of Emergency existed.

The Proclamation would last for one month unless renewed and it would enable Ministers to take a wide variety of powers by laying specific orders before Parliament under the Emergency Powers Act 1920.

The orders would lapse after seven days unless passed by a Parliamentary vote.

Air and ferries offer little relief

BY PAUL CHEESERIGHT

THE TRADING community yesterday viewed a dock strike more apprehensively than this year's steel strike. In spite of expansion of air freight, the UK's dependence on sea routes is overwhelming.

Altbougb latest trade statistics showed exports holding up well — £3.9bn in August — exporters have had an increasingly difficult time with the world recession, and with the rise in the value of the pound.

A dock strike, it is feared, will exacerbate problems associated with the national repulation for poor reliability on deliveries. Markets lost becauae of tbe strike may not be easily regained.

Sea transport took 74.5 per cent by value of the UK's exports in 1978, the last year for wbich a detailed breakdown is available. The percentage is unlikely to be much cbanged for 1979. In 1970, exports carried by sea amounted to 79.6 per cent.

The situation is mucb the same for imports—77.2 per cent arrived in the UK by sea in 1978, compared with 82.3 per cent in 1970.

Principal seaborne exports are UK economy staples—textile yarn, iron and steel, metal manufactures, power-generating equipment, specialised machinery, road vehicles, petroleum and petroleum products.

Imports follow the same pattern but there have been significant changes in terms of petroleum and petroleum products. The increase in production in the North Sea meant crude-oil imports fell steadily.

Last June they arrived at the rate of 865,000 barrels per day but in June, 1979, they came at 1.1m b/d and, a year before that, at 1m b/d. However, in June, 1973, tbe rate was 2.5m b/d. Prodnct imports in June, 1980, and June, 1979, were 240,000 b/d, compared with 439,000 b/d in June, 1973.

UK ports handled 92m tonnes of goods in tbe first quarter of this year and 10 of tbem had traffic of more than 3m tonnes each. These were London, Medway, Southampton, Milford Haven, Liverpool, Shetlaods, Orkney, Forth, Tees and Hartlepool, and Grimsby and Immingham.

The key ports, taking imports wortb more tban £1bn each in 1978, were London, Southampton, Medway, Dover, Milford, Liverpool, Immingham, Hull, Harwlcb and Felixstowe. Of these, all except Medway, Milford and Immingham exported goods worth more than £1bn.

But figures hide the increasing importance of roll-on ferries and container traffic between the UK and EEC ports, in which Dover plays a growing role. This underlines the key role played by the EEC in the UK's seaborne traffic.

More than 40 per cent of Britain's total sea trade is with the EEC, and 80 per cent of all the goods whicb move between the UK and the EEC is b y sea.

There can therefore be scant relief only from other forms of transport. Air transport has increased but imports account for less than 1 per cent of total weight and for more thao 17 per cent of value, while exports' value increases to 20 per cent.

Moves to protect North Sea oil output

BY RAY DAFTER, ENERGY EDITOR

NORTH SEA oil and gas development projects conld be affected seriously by the dock strike. Already oil companies are making contingency arrangements in an effort to keep their offshore fields in production.

The offshore industry warned last night that work on new fields and major maintenance schemes could be affected almost immediately. Companies would find it difficult to ship equipment to North Sea fields, particularly as about 80 per cent of the orders are met by UK manufacturers and suppliers.

Consequently, oil companies accept that a prolonged dock strike could cause serious delays to the build-up of UK oil production.

There also is concern within the offshore industry that present production could be bit, whicb in the long run could have a major impact on the country's balance of payments, Government revenues and industry casb flow.

It was pointed out yesterday that offsbore operators would not only find it difficult to replace faulty equipment but in time they might be unable to supply rigs and platforms with sufficient "life support" provisions — including food and fuel.

More tban 10,000 men work on rigs and platforms in the UK sector of the North Sea.

North Sea installations always carry reserve stores of esseotials in case fields are cut off from the mainland by bad weather. A dock strike, therefore, would not bave an immediate impact on production rates, now running at between 1.6m and 1.7m barrels a day.

British National Oil Corporation, operator of the Thistle Field and now exploiting the Beatrice reservoir, said last night: "Obviously any dock strike would affect us and we are watching the situation very closely iodeed."

Shell UK Exploration and Production, operator for the Shell/Esso offshore partnership, commented: "In the event of a national dock strike we would expect to encounter some difficulties in our operation." The Shell/Esso partnersbip produces oil from tbe Auk, Brent, Cormorant, and Dunlin fields.

British Petroleum would say only that it is "keeping the situation under review."

Concern about overseas markets

BY JAMES McDONALD

BRITAIN'S two biggest individual exporters, ICI and Ford, are seriously concerned over the effects the national docks strike conld have—and fairly quickly — on their overseas markets.

An ICI spokesman said: "I cannot imagine anything worse for a chemicals industry, already in a state of recession, than an extended docks strike. We could lose some nverseas markets quickly."

The company's exports this year bave met keen West European competition in the plastics, man-made fibres and some general chemicals sectors, with supplies plentiful and prices very competitive. ICI has bad to accept reduced profit margins on a number of items to retain some European markels.

Ford, perhaps better known for its imports of Capri, Granada and Fiesta models, ranks second only to ICI as an exporter, and it is very worried about the effects of a dock strike on its exports of components to Europe.

Ford is particularly concerned over the possible disruption of supplies of the Escort 1.3 and 1.6 litre engines from its Bridgend plant in South Wales to West Germany to power the new Escorts for the wbole European market, with a launch date there of September 26.

Radiators and mucb of the electricals for the German produced Escorts are also made in Britain.

Elsewhere in the motor industry reactions were more subdued. British Leyland could see no immediate effects. There were "good stocks" of BL cars overseas where there had been a slowing in demand, and few cars were being imported from Belgium.

Stocks of cars in Britain were bigb aod the company was already working a reduced schedule.

For the engineering industry generally much will depend on tbe length of the stoppage. In tbe sborl term, two or three weeks, there should be little effect on production; there is a good deal of steel available and demand is low.

Fears of panic food buying

BY DAVID CHURCHILL, CONSUMER AFFAIRS CORRESPONDENT

THE KEY QUESTION about the effect of a national docks strike on food supplies is how extensive the inevitable panic buying will be. Although the Ministry of Agriculture, and much of the food trade, was fairly optimistic yesterday about food supplies in the event of a strike, there was general agreement that widespread panic buying could upset calculations.

It is acknowledged within the food industry that panic buying during the road haulage and steel strikes caused as much disruption as the strikes themselves.

A docks strike, however, is likely to be more serious than either of these two recent disputes in its effect on the food industry. Tbe UK imports £5.3bn of foodstuffs for home consumption—about 50 per cent of the country's total food requirements.

Bnt the timing of the strike means the relatively good harvest should ensure adequate supplies of fresh fruit and vegetables in the immediate future. Meat should not be badly affected sinca three-quarters of total supplles are prodnced in the UK.

Howevar, some 54 per cent of the UK's sugar requirement comes from abroad.

Food manufacturers said yesterday that tbe effect of the strike could lead to severe shortages of particular products but adeqnate supplies should be available for several weeks—assuming panic buying does not get out of band.

Much depends on the effectiveness of the dockworkers' attempt to ban all movement within the docks areas, and the extent of secondary picketing.

Concern also exists in official quarters over the level of stocks carried by food manufacturers and retailers. It is believed that bigh interest rates have led many manufacturers and retailers drastically to cut their stock levels. Thus, the normal two months' supply of processed Food available may be reduced.

Stockpiling cushioned industry in acrimonious 1972 stoppage

BY LISA WOOD

DURING the last national docks strike in 1972, which lasted three weeks, the Conservative Government invoked emergency powers as a precantionary measure, just one week after the strike was declared.

That was the fourth time the Heath Government had invoked such powers. The previous occasions were the 1970 dock strike, the go-slow of power workers in tbe same year and the miners' strike earlier in 1972.

In the event, Ministers did not bring troops into the docks —an action which would have been regarded by dockers as highly provocative.

The national strike was the culmination of several years in which employers, tbe Transport and General Workers' Union, tbe Stevedores' Union in London and the Government, had all failed to confront the problems of a traditionally labour-intensive industry being forced to change drastically in character in the face of technological developments in cargo bandling.

Mr. Jack Jones, the general secretar yof the TGWU at the time, said the dockers' main grievance was that for the five years previously they had been promised regular work if they acceped mechanisation and new working metbods.

In those years the workforce bad been run down from 60,000 to 40,000 and some operations previously done in the docks, by dockers, had been moved outside.

The union called the strike in support of claims for an increase in fall-back pay for unemployed dockers from £20 a week to £42 a week, four weeks' annual holiday and an agreement that dockers bad the sole rights to "stuff and strip" containers.

In the weeks before the strike the mood in the docks was charged by a major confrontation between dockers, picketing container depots, and the National Industrial Relations Court, which was set up by the Industrial Relations Act. It had ordered the pickets to stop blacking lorries in their fight for the right to bandle containers and other cargoes at inland depots.

Five London dockers were imprisoned for defying the order and unofficial strikes broke out io ports in protest. Otber workers, estimated to total 170,000, including printers, miners and steelworkers, went on strike in a protest which grew into a general attack on the Industrial Relations Act which had come into force earlier that year.

Anger over the imprisonments contribnted to the rejection of a report—prepared by the Aldington Jones Committee —which put forward proposals for dealing with the jobs crisis in the docks, and the daclaration of a national strike. The same initiatives of this committee brought tbe 1972 strike to an end are contribuling to the present dispute.

During the last few days of the strike the Government daily defarred taking emergeocy action to release cargoes of animal feeds urgently needed by farmers.

The effects on manufacturing industry were not as serious as expected, mainly because of the strike's timing. It came in July and August, wben many industries close down for annual holidays while others reduce prodnction because of holidays.

In addition, the comparatively long build-up period to the strike gave organisations dependent on imported raw materials a chance to build stocks up beyond the norm for the time of year.

For the steel industry, iron ore stocks in the country were said during tbe strike to be sufficient for about six weeks. More important, accordiog to the British Steel Corporation, was the suspension of export shipments. Half-way through the strike the corporation had more than £2m worth of steel—some 42,000 tonnes—held back in the ports.

Business and Investment Opportunities

UK NEWS—LABOUR

AUEW merger held up by legal action threat

BY JOHN LLOYD, LABOUR CORRESPONDENT

PLANS for a full merger between the four antonomous sections of the Amalgamated Union of Engineering Workers have been set back because one of them—the 200,000-strong white-collar section, TASS—has threatened legal action.

The proposals to merge the four sections date from 1970, when tbe amalgamation was created.

The 75,000-strong Union of Sheet Metal Workers, which is not part of the amalgamation, has said it also will take part in the merger, which would create a union of around 1.5m members.

The 1.2m-strong engineering section, together with the two small craft sections—the 54,000-strong foundry workers and the 25,000-strong construction workers—have completed the preliminary formalities on the merger.

The construction section was ready to move to a ballot of its membership but it was halted two weeks ago.

Mr. John Edwards, the Certification Officer who oversees the conduct of union mergers, had received a letter from TASS saying it was prepared to take legal action to ensure that the interests of its members were safeguarded.

Mr. John Baldwin, general secretary of the construction section, said yesterday that his union also would consider legal action, if the Certification Officer did not allow the ballot to proceed. A decision from the Officer is expected next week.

Mr. Baldwin said: "It is quite clear that tha Certification Officer has heen threatened by TASS."

Both sides have strong reservations over the merger. The dominant engineering section, together with the two small craft sections, are insisting that once the merger is completed, TASS officials must be elected by hallot rather than, as at present, appointed by the executive.

Mr. Terry Duffy, president of the AUEW's engineering section, said in his address to the union's national conference in Llandndno yesterday that "TASS are still not in a position to remove tha main nbstacle to real amalgamation because their officials are appointed."

TASS is concerned that an immediate imposition of the elective process would hreach the contracts of its officers—though it says it is willing to elect its officials in tha future.

It is also disturbed hy the announcement over the weekend that the engineering section's national committee had mandated delegates to the Labour Party Conference later this month to vote against the three constitutional reforms proposed by the Party's Left wing.

Mr. Ken Gill, TASS general secretary, said yesterday: "If we were part of an organisation that took decision in advance of our arrival and we came only to be informed of it, then that would be a gross intrusion into the democratic rights of our members."

● Engineering workers would "not stand idly by and yield to Government attack," Mr. Duffy said yeaterday in his address to the conference.

Craftsmen's dispute hits BBC work

BY GARETH GRIFFITHS

BBC TELEVISION productions have been hit by a dispnte hetweeo members of two unions, with the prospect of a possibly hitter demarcation row hetween the unions later in the week.

The National Association of Theatrical, Television and Kine Employees and the Association of Broadcasting Staff both bave members in the BBC's scenic operations and construction department, which is the centre of the row.

A BBC decision last mooth not to allow a carpenter and bis mate on location to build a door for a television programme, Dawson's Watch, being filmed in Ross on Wye, resulted in the programme being blacked by both unions.

The BBC argued it did not bave enough mooey to allow the craftsmen to go on location and that the work sbould be done by employees in the special effects department.

Last Thursday the BBC suspended 27 members of hoth unions in the scenic operations and construction department at its West London studios. Altogether 143 union members went on strike and hy yesterday 224 staff had heen taken off the pay roll, the BBC said.

Programmes hit are mainly in tbe light entertainment and childreos' departments. Popular comedy shows such as The Des O'Connor show were lost over the weekend and last night's Blue Peter went out from a bare studio.

The BBC said last night the effects of the dispute would be felt very quickly, hitting productions for the autumn schedules. Br. Bill Cotton, BBC TV's acting managing director, said in a letter to staff that the corporation could not afford to send staff on location wben they were not needed.

Talks were beld yesterday between officials from both unions over the dispute. A meeting of the ABS London television committee today will discuss tbe matter and NATTKE plans further talks with the ABS.

Crane men picket oil refinery projects

By Gareth Griffiths

CONSTRUCTION work at the oil refineries at Milford Haven, Pemhroke and Sullom Voe, Shetland, were the first projects to be hit by the first full day of the crane-drivers' national strike yesterday.

Between 2,000 and 3,000 carne drivers are taking part in the strike. Local unions officials claimed a response from about 90 per cent of the membership and have set up pickets at important sites.

Most large scale construction projects in the country are affected by the strike, including power stations such as tbe Isle of Grain.

The effects of the action are expected to be felt fairly quickly on the larger sites, particularly as most construction companies hire crane drivers from contractors

The dispute between the construction section of the Amalgamated Union of Engineering Workers and the Contractors' Plant Association is over the sacking of 500 crane drivers in the North East and South Wales for carrying out an overtime ban

Mr. John Baldwin, the AUEW construction general secretary said yesterday the dispute was over the sacking of these men, not a pay claim. Tbe union had asked for a rise in the minimum skilled rate to £2.20 per hour.

The employers had said they could not afford the deal without abolishing a guaranteed minimum bonus and reducing maintenance payments.

Vauxhall to implement 8% deal despite opposition

BY PAULINE CLARK, LABOUR STAFF

VAUXHALL motor company told its 23,000 hourly-paid workers yesterday that it was "taking administrative steps" to implement an 8 per cent pay offer in spite of failure to agree the deal with trade unions.

Payment of the increase giving on average an axtra £7, is likely to be accapted this month without opposition from the 15,000-strong workforce at Lutoo and Dunstable. They accapted tbe package last week in secret hallots.

However, Vauxhall workers at Ellesmere Port, at a ponrly attanded mass meeting, voted to oppose the deal. Union leaders of the 7,000-strong workforce there indicated yesterday that no move was planned to confront the company on its decisinn to imposa the deal. But a meeting is likely to be held this week at which they will report back.

Yesterday's move mada this the second pay deal concluded hy a major motor company in this year's pay round. It follows acceptance of an 8-12 per cent settlement reached with leaders of 12,000 Talbot workers this month. The Talbot deal, covering 18 months, pays another 7 per cent from next March.

Management course for women praised

By Our Labour Staff

THE Engineering Employers' Association in the West Midlands was praised yesterday hy the Equal Opportunities Commission for its lead in launching a "women in management" course.

Baroness Lockwood, chairman of the EOC, said women-only management schemes are "a pragmatic recognition that although the number of women managers is increasing, conventional courses where women are singled out as token females will remain for some time."

The association had given an exemplary lead in positive discrimination. This was not intended to make nne sex "more equal" but to anable the disadvantaged sex—male or female—to compete on an equal basis with the opposite sex, said Lady Lockwood.

London weeklies strike

BY GARETH GRIFFITHS

THE National Union of Journalists said yesterday the strike by 500 of its members on London weekly papers could affect this year's pay settlement for 9,000 provincial journalists.

The atrike by the London weekly journalists started yesterday although the one evening paper affected, the Slongh Evening Mail, did appear. The NUJ aays it has received an assurance from the National Graphical Association tbat articlea written by non-NUJ members will not be aet.

Delegates from the provincial newspaper sector are to meet in London on Saturday to formulate a pay claim for this year'e negotiations with the Newspaper Society—the same employers' group with which the union is in dispute over the London strike.

A wage claim for an extra £20 a week for senior journalists employed on provincial papers has been drawn up.

Union officials yesterday expressed concern that the London strike could delay a settlemant for all provincial papers. Tbe dispute in London is over a claim for a weighting allowance of £20 a week.

Cuts 'hit Civil Service morale'

BY GARETH GRIFFITHS

CIVIL SERVICE unions yesterday said their members in the Department of Employment were suffering from a crisis of morale because of Government staff cuts. It warned that unofficial strike actinn was a strong possibility in many benefit offices.

A delegation of four nnions—the Civil and Public Services Association, the Society of Civil and Public Servants, the Civil Service Union and the Institution of Professional Civil Servants—yesterday saw Mr. James Prior, the Employment Secretary, to express their concern over staff cuts in the Emplnyment Service.

The Government reaffirmed its determination to keep the Advisory, Conciliation and Arbitration Service and the wages inspectorate nf the Wages Council. The unions bad earlier expressed worries about rumours that the two bodies were to be abolished.

Tbe delegatio nhowever expressed disappointment at the rest of their interview with Mr. Prior, which had heen postponed twice. A further meeting is planned for October. The Department of Employment has already saved 3,000 jobs but total staff cuts will amount to 11,893 posts, more tban 20 per cent of the total staff.

Mr. Terry Ainsworth, tha CPSA employment national officer, said that because of rising unemployment the Departmeot of Employment had had to recruit 3,500 tmeporary staff. Staff in the department had suffered from cramped accommodation and insufficient people to deal with the rise in unamployment. Morale had fallen and the Government seemed unable to see what was happening.

The unions claim that because of the cuts delays in the payment of Giro cheques for the unemployed have risen from two days to three days. Checks on paymants which are supposed to take place on a sample of 2 per cent o fthe total number have been dropped to save staff and the unions feel that the position can only get worse.

The CPSA yesterday gave permissio nfor industrial actioo by operators of a computer transmitting system in London employment offices. The action could hit the allocation of jobs to job centres.

Technical Page

EDITED BY ARTHUR BENNETT AND ALAN CANE

● ELECTRONICS

Computer thinks it is an oscilloscope

HEWLETT PACKARD, a leading U.S. electronics manufacturer, has done more with its latest product than simply add computer intelligence to hrighten up o conventional instrument.

Its latest oscilloscope, the HP 1980 System, is effectively o microcomputer which behaves as if it was an oscilloscope.

Hewlett Packard (HP) bas thus opened the door to a whole range of electronic test and measurement producta which are simply microcomputers in instrumentotion clothing.

What Hewlett Packard have done with the humble oscilloscope io turning it into the 1980 System will make it almost unrecognisable to the electronics engineer used to the conventional model.

The traditional face plate with screen and a myrisd of dials and switches has heen replaced hy a screen rather like a computer video monitor and an array of simple, colour coded touch switches. Each switch has its function written on it and when activated an internal light illuminates the functioo.

The new machine costs £4,777, whereas a conventional oscilloscope would cost oround £3,000.

According to HP executives this week tbe morket worldwide for oscilloscopes of this type is aronnd $250m, of which $150m could go towards the new computer-based oscilloscopes.

The advantages of the 1980 System, opart from the extra featurea made possible by computer tecbnology, are ease of operotion and time sovings.

According to HP, calihration of the new device can be accomplished in 45 minutes, compared with 6 bours for a conventional model.

For many measurements, the machine can be operated completely automatically. HP reports that in prelauncb trials, there was a split of opinion between those who found the 1980 System easy to use, and those who found it too much of a change from the orthodox oscilloscope.

William Terry, generol manager of HP's instrument group argued: "A simplified front panel, instead of the complex array of knobs on conventional oscilloscopes, can cut set-up time by a factor of five."

The machine is a completely stand alone instrument that does not require plug-ins or enhancements to make measurements

It does have the option of accepting special modules for speciolised measurements. Its internol architecture is organised around the HP interface bus (IEEE standard 488) which means it can be programmed from outside and can send data to a controller for analysis or to a hard copy printer.

A single rotary control replaces the many on traditional scopes for adjusting all the variable fuoctions. Its action depends on which of the froot panel touch keys has been activated.

An important feature is automatic signal acquisition. When "autoscope" is activated the instrument automatically sets its controls to capture ond display the predominant signals.

HP helieves it will he possible for operators with less skill and training to operate the new machine and is looking for markets chiefly in electronic production and in research and development.

It is based on a powerful microprocessor, the Intel 8085. Most of the cost of developing the 1980 went into the computer software which makes possible all the fancy fuoctions and simplicity of use. HP in the UK can be reached or Reading 61022.

● IN THE OFFICE

Sitting at the drawing board

MOST drowing hoards sold in Britain are imported, says Bothwell Engineering Company, which is now marketing one of its own design.

Claiming it to be of a new type, the company which is located at 67 Main Street, Bothwell, Strathclyde (0698 854068), is showing the drawing board at the Scottish Engineering Exhibition in Kelvin Hall, Glosgow, in November.

It hos been designed so that the draughtsman can sit at his work and the backing sheet is mounted on rollers so that the drawing con be pulled down to a convenient and comfortoble working position. The backing sheet provides a working orco of 1.2 hy 2.1 metres.

● PROCESSING

Applies a very tough surface

WHERE PARTICULAR kinds of surface characteristics are needed, to resist wear and corrosion for example, in-vacuo processes in which appropriate moteriels are propelled into the surfoce are proving increasingly attractive, if somewhat expensive.

A year ago commercial versions of the Harwell room temperature ion implantation machine were announced by Hawker Siddeley Dynamics Engineering of Hatfield which were aimed at tool metal hardening and it is understood that this maehine is now being evaluated by the UK aerospace propulsion companies.

Plasmo nitriding is established as a process by J. J. Castings in South Wales and o good deal of plasma coating research is going on at Liverpool University.

However, Georsl Electric Company of the U.S. has now come up with what it believes is the best metbod yet devised for combating bot corrosion in gas turbine "huckets" (the scoop-shaped aerofoils that are spun by the bot comhustion gases). The special coating applied prevents the goaes attacking the substrate metal.

The material used by the GE (U.S.) research laboratories is a blend of cobalt, cbromium, oluminium and yttrium and the company's preliminary tests sbow that buckets coated with the new moterial should last more than 40,000 hours in the most bostile corrosive environments. It is cloimed thot this is three times that of uncoated buckets and a "significant improvement over the currently used coating meteriol."

These gas turbine buckets (blades) have been given an ultra-durable coating at GE(USA) laboratories using a hot plasma in-vacuo process

Resulting coated alloy gives an optimum balance between corrosion resistance and the mechanical properties needed to take the high stresses encountered. Temperaturea of 1,650 deg. F and top speeds of 1,200 mph are not uncommon.

Aluminium is the key element giving the good corrosion properties: it reacts with atmospheric oxygen to give the oxide, a ceramic material highly resistant to attack by salt compounds in the combustion products of gas turbines.

These kinds of techniques, which are finding other industrial applieations, involve the use of a stream of ionised gos to carry metallic molten particles on to the surface to be coated.

At GE (U.S.) the plasma is created by passing a mixture of argon and helium gases at high pressure through an 80 kW electrical arc in the nozzle of the spray gun. The gases ionise, reaching instantaneous temperatures of over 20,000 deg. F, and this stream is first used to pre-heat the target surface. Powdered coating moterial is then blown into the nozzle where it melts immediately, strikes the surface and, because of the pre-heating turns into o good quality metallic inter-diffusion layer. The nozzle is scanned o number of times to give the required build-up and the bucket is then heat treated again.

The development team has set up a pilot scale facility in which a factory oriented production process can be worked out. The company says this will pave the way for the planned addition of on automated coating facility to the Schenectady, New York gos turbine factory.

GEOFFREY CHARLISH

● COMPUTERS

Computer car has arrived

AFTER SOME five years of piecemeal announcements from many companies about the application of small computers and other electronics to the motor car, General Motors now seems to have taken the plunge in a big way with the quite unambiguous stotement that "from today, virtually all GM petrol-driven cars built in the U.S. will be fitted with a small digital computer about the size of a text book."

It claims as a result to have become the largest manufacturer of computera in the world (albeit by unit count, not by value) because aome 18,000 to 20,000 of these units are being made per day at the Kokomo and Milwaukee plants of Delco Electronics division (a GM subsidiary).

The two-board microcomputer has been christened Computer Command Control (CCC) and appears to be able to carry out most of the tasks so far suggested for the car computer and several others besides.

Basic tasks are to regulate precisely the air fuel mixture entering the engine to give optimum fuel economy, improved engine performance and much better control of exhaust emission.

The micro receives data from appropriate sensors obout cooling system temperature, crankshaft revolutions, throttle position, manifold pressure and the amount of oxygen in the exhaust gases. It analyses all this in milliseconds and then, according to its program sends out digitol pulse instructions to engine and drive train components. Messages sent to the carburettor for example give rise to fuel adustments at up to 10 times a second. Other functions controlled include engine idle speed and the operation of automatic transmission converter clutch.

Variability of the GM models is easily taken care of in the way in which the computer is programmed: the same CCC is used in all cases.

An interesting result of this highly significant GM move is that many conventional engine components bave had to be re-designed. The distributor on most models for example bas no vacuum advance and no centrifugal advance mechanism: the necessary instructions come from the micro. Spark timing is of course also controlled.

But there are some extraordinary refinements to the basic functions in the various new GM models.

For example, the engine in one of the Cadillac models can be automatically converted from six litres V8 to 4.5 litres V6 and then to three litres V4 as and when power needs change—the result of continuous total monitoring of the situation by the computer.

Similarly, the air conditioning and the seat positioning can be controlled; in the lotter case the computer remembers the desired positions for various drivers.

Several programs are concerned with warm up. For example, a heated grid, energised according to the computer instructions, is placed below the carburettor throttle butterfly to maintain the induction system fuel-air mixture at a precise temperoture. The result is cold engine smoothness and emission control during warm up, it is claimed.

In addition to all this, the computer has to deal with the very tough U.S. exhaust emission requirements via a system which GM calls an air injection reactor. Air is supplied exactly as and when needed to exhaust manifold and catalytic convertor and at other times diverted through the oir breather.

Built into the software is a diagnostic program; this monitors the engine control system sensors and actuators, memorises any malfunction even if temporary and alerts the driver by means of a tell-tale light on the instrument panel.

The system will then substitute nominal volues for the critical sensors allowing the car to keep going until repairs can be made.

Evidently, motoring in the 1980s is going to be rather different from that in the 1970s. Presumably these extraordinary developments in the U.S. GM models will in due course have their counterparts in the European componies' production and in any event other manufacturers will certainly move in the same direction.

GEOFFREY CHARLISH

● SAFETY

Protects the legs

THOSE WHO sharpened their chainsaws enthusiastically using the device mentioned on this poge yesterday, moy have need of the latest product from Fothergill ond Horvey.

It makes o toughened fabric which can be fashioned into protectors against the thousands of leg injuries sustained each year by chain saw operators.

As Fothergill aod Harvey puts it: "Flesh and bone are ripped away in even less time than it takes to lop off a branch."

Traditionally, chain saw operators wear bulky leg protectors made up of 28 layers of knitted nylon. This provides adequote protection, apparently, but restricts movement and can be a hazard to the operator in uneven terrain.

Fothergill and Horvey cloims that leg protectors made up of four layers of its D235 fabric give the same or better protection than the nylon layers.

Its claims have been substantiated by the Forestry Commission in the UK and the Finnish Research Institute for Engineering in Agriculture and Forestry.

The D235 fabric is woven from Kevlar 29 aramid fibre yarns produced by Du Pont — Fothergill and Harvey already make it up into bullet proof undershirts, vests and coats, and protective costumes for bomh disposal experts

Fothergill and Horvey is on 0706 78831.

● PLASTICS

Makes a good joint

ULTRASONICS, part of the Dawe Group, is offering a machine for vibration weldiog of thermoplastics parts with particular emphasis on acetal, nylon, polyethylene and polypropylene.

Frictional heat resulting from the vibration of the parts to be joined at their interface produces strong, pressure-tight joints with the prospect of improved assembly of automotive fuel pumps, water pump housings, heater valves, air intake filters, pump impellers, batteries and many other components in industry.

More from Otley Road, Shipley, West Yorkshire BD18 2BN (0274 587411).

THE MANAGEMENT PAGE

EDITED BY CHRISTOPHER LORENZ

The relentless rise of a British conglomerate

Richard Lambert on BTR which, despite the recession, has just reported another surge in profits

THERE are not many companies in Britain like BTR. It has an almost evangelical commitment to growth, which it describes in terms that were familiar during tha early 1970s but which most other companies have quietly forgotten. And its expansion over the past decade has given its shares the kind of stock-market rating and performance which is usually associated with a handful of high-flying electronic hnsinesses.

Yet BTR's activities are rooted in manufacturing industry, much of it unglamorous. Antomotive components, like moulded rubber, car carpets, ruhber extrusions and weatherseals, account for nearly a fifth of its aales. It is hig in conveyor belts, industrial hose, reinforced plastics and valves.

Although it likes to group its businesses under a few coherent headings — materials handling, transportation, energy and engineering—there is often little nbvious industrial logic in its business structures. Its overaeas activities are only now becoming of major importance in terms of profits, and the old Empire (South Africa and Australia) still looms large in its overseas portfolio.

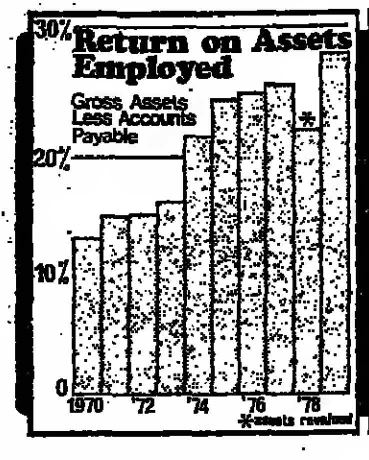
From this unpromising hase, BTR has expanded its pre-tax profits from £2.9m in 1970 to a figure which will not he far short of £70m in 1980. Earnings per share have risen roughly 15-fold over the period. The return on capital—on the hasis of relatively np-to-date asset values—is over 28 per cent.

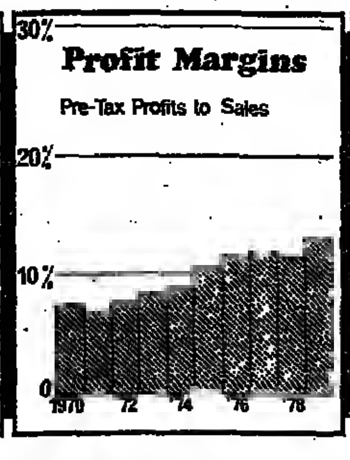
The key to this expansion is a management style which is not particularly original or sophisticated, but which is pursued with a most un-British kind of relentlessness.

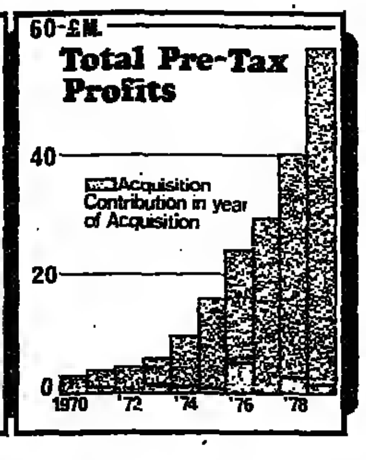
At BTR, business objectives are expressed exclusively in terms of profit. Owen Green, the managing director and chief architect of the group's expansion, says that the main difference between BTR and the many companies which it has acquired over the years has heen that "most of them were not as profit conscious as we are. They did not understand profit, or regard it as an objective in itself."

This approach is evident throughout the group, sometimes in qulte trivial ways. For instance, even the small central purchasing department is treated as an individual profit centre. And the group is not a memher of the CBI hecause "we didn't feel it was worth the money."

Profit consciousness is instilled by a system of decentralisation into small business units, each with a large measure of profit responsibility. BTR gets detailed monthly figures from some 200 separate profit centres. The management of at least 100 operating units presents itself at head office each autumn for detailed hudget discussions.







Autonomy

The extent of this decentraliaation can be seen at the group'a large rubber moulding factory at Burton. This bas annual sales of around £25m—divided among some 14 separate profit centres, which have a high degree of autonomy in areas like markating and production. All labour negotiations throughout the group are conducted at the local level.

BTR is a line managed operation, in which central staff play a relatively small role. Owen Green believes tbat it is important for authority and decision making to run through direct rather than dotted lines. "Too often," he says, "people have two hosses: a line manager on the one hand and on the other, a group of experts in varlons specialised activities who try to override and change decisions that have been made."

BTR, he claims, has a clear chain of command — a strong line running right the way down the group. To make this practical, the line has heen geographically directed. At the top is himself, with a big hlack line running down through the executives responsible for three grandly-named divisions: Western Hemispbere, Europe, and Eastern Hemisphere.

In practice it has been found that an executive can only handle six or seven direct operation responaibilities effectively. "So we have a system of big fleas, little fleas, and littler fleas."

BTR'a ideal is to establish a series of strong positions in what it describes as "niche businesses." These it defines aa activities that have a special sector in a large morket, or a large sbare of a specialised market. Either way, the theory is that so long as the customer receives good quality and service, it will be the supplier rather than the customer who dictates the price.

A niche business can be shrinking, flat or expanding. The key thing, in tbe gospal according to BTR, is to identify the niche and then to set up a special organisation to exploit it—with an identified individual directly responsible for the profits.

In practice, of course, it is possible to question how many of BTR's great multitude of products fall into this desirable category of business. But in a number of cases it has succeeded in splitting what might look like anonymous jobbing factories into separate businesses, each with its own market in view.

To take the Burton example agaio, cutless bearings and handrails have been identified as separate businesses serving particular customers. Traditional rubber hose has been replaced by high pressure hose for the aircraft industry, manufactured uoder liceuce. Tbe general footwear side has concentrated its activities on specialised markets like hoots for surgeons and firemen, ratber than trying to slug it out in, say, the market for children's boots.

Consistent with ils emphasis on profits, the group takes an unsentimental view of market share, and — says Green — will never cut prices in order tn gain volume.

BTR does not expect its businesses to require large lumps of capital spending. It bas a distinct averaion to large-scale fixed investments involving long pay back periods, which it believes are hoth too risky and unnecessary.

According to Norman Ireland, the finance director, "The days of heavy spending oo the process industry have passed" —and he expects that capital spending on plant and equipment should pay for itself within a period of three to five years.

A good number of BTR's profitahle "niches" are mature businesses anyway, and do not require a great deal of new investment. For instance, cutless bearings have been in production for over 50 years.

Product diversification is also seen as a virtue, whicb is just as well sioce its acquisitions have taken the group into a host of unrelated activities. As a result, it has been able to offset setbacks in one area with progress in another. For the same reason, BTR wants to spread its resources in broadly equal parts over its three maio geographic regions. At present tbe UK alone still accounts for roughly half its profits.

But BTR deliherately steers clear of consumer related activities. Grean believes that consumer and iodustrial activities can seldom be mixed satisfactorily within one business. They require a different temperament, he says: one quick and inspirational, the other more methodical, and working oo products with a mucb longer life cycle.

For all its emphasis on decentralisation, BTR's central staff play a key role in financial management. The three-year corporate plan is issued from the centre, and so is the annual budget.

In tbe early summer, the finance director starts to define in detail the profit objectives of the varlous units for the following fioancial year. By the autumn, these have been broadly reconciled with the forecasts of the operating units ihemselves—and they then coue in for their annual hudget presentation.

At these occasionally gruelling encounters, the central management's objective is to pio down precisely how much of lbe change in anticipated profit stems froı inflation, volume movements, cost controls or product developmeoı.

Once the reporting period gets under way, head office in London receives in the first week of cach month initial details from about 200 centres of sales, outstanding orders, cash balaoces and profits. Within three weeks thal has been firmed up with fult information on capital spending, manpower, orders, profits and balance sheets. Head office also acts as banker for all the UK activities.

As well as financial management, the central staff also inclndes personnel management, a purchasing department for items like ruhber or cbemicals whicb can best be bougbt in bulk, together with staff handling deht collection, property, advertising and legal matters. Tbe head office keeps tabs on about 400 key executives around tbe group, and grades employees into various job categories. This, Green believes, is helpful to local management and makes it easier to switch executives from one activity to another.

Organic

All in all, there are rather more than a 100 people working at head office—a modest number for a group of BTR's size, with 24,000 employees around the world.

BTR has extracted a good measure of organic growtb from its established businesses. Green claims that as much as two-fifths of its present size stems from companies which it already controlled in 1970. But this has not been enough to satisfy its growth ambitions, and there has been a series of ever larger takeovers during the past decade. The latest, Huyck, will cost about $155m (£62m).

The group generally keeps existing management of acquired companies in place, although this has not always been the case. Around 35 of the top 40 U.S. executives of Worcester Controls had gone within six months of the purchase (to be replaced by aignificantly fewer people).

Some of the acquisitions have brought headaches. Andre Silentbloc, for instance, produced very poor profit figures after a bitterly-fought takeover battle in 1977. But more often, BTR has been able significantly to increase the profitability of its acquisitions.

Allied Polymer, for instance, was heading downhill fast wben BTR made a takeover bid at the end of 1977. Since then its bead office bas been closed, bringing an aonual saving of perhaps £¾m. An Australian lossmaker, Driclad,—which had threatened to bring the whole group to its knees—has been sold, and so has a UK consumer products business. Plastic products are being rationalised, and spending on plant and equipment has heen increased after years of casb starvation. The balance sbeet bas been refinanced on much more favourable terms. And the business bas been broken down into small, profit responsible units.

In 1976, Allied Polymer made £1m before tax and a heavy, extraordinary loss. This year, with a very much smaller workforce, it could make over £6m. The company cost BTR under £10m.

BTR is now planning sizeable new Investments in Allied Polymer. This is its answer to any suggestion that it is simply interested in maximising short-term profits hy ripping into hadly-managed businesses, without too much regard for tbe long-term consequences.

In the 1970s any number of acquisitive companies ran into trouhle. They bought bad businesses, over-stretched their management, and hit financial difficulties by relying too much on the strength of their share price.

To tbe outsider, an obvious risk facing BTR is that its acquisitions are getting bigger, and that one day it will make a real bowler. Needness to say, management does not accept this threat. Green points out that as a proportion of its present size, tbe bid for Huyck is na longer than tbe acquisition of Miles Redferu in 1971, which cost under £3m.

"I don't agree that growth gets harder as you get bigger," he says. "The quality of decision making required is no greater —provided that you are able to oversee the organisation in a decentralised way, and that you get the right people to run it."

BTR is not in the business of financial portfolio management he adds, but of managing industries which it knows about. And its finances tend to be quite conservatively structured. Sbarebolders have always been happy to stump up new equity on demend.

How hig could BTR become without changing its character? Green does not make forecasts. But allowing for inflation and further equity issues, he suggests that hy 1990 BTR sbould be capahle of handling annual sales of, say, £5bn and profits of perhaps £500m to £600m a year hefore tax.

Whether or not this is realistic, the fact that the possihility is discussed at all in the present industrial climate underlines the point that hy UK standards, BTR is a most unusual company.

Owen Green, managing director of BTR whose gospel is to identify a niche and then set up a special organisation to exploit it

A feather's breadth from the pole position

"BRUCE THE Goose" very nearly stole the show recently at Cranfield Management School. The event was the final judging of the presentations in this year's Enterprise and New Ventures Programme which forms a major, though optional, part of Cranfield's MBA course. The programme is designed to allow participants to prepare an idea for a small firm in such detail that it can subsequently he launched as a husiness. At the end of the course several panels of financiers and entrepreneurs assess which are the best projects.

This year it was Peter Lockett, with ambitious and well presented plans for a computer software distribution business, who emerged in the numher one position. In the process he also won £100 presented by the Institute of Directors. Lockett had put together a substantial business plan; be is all ready to go and has the necessary financial backing. Though his plans originally involve importing software programmes developed by a Belgian company, be also reckons that his organisation will move on to marketing UK software on the Continent through the Belgian link.

An even more amhitious project, for a cable television company to operate in Rhode Island, in the U.S., came second. Angus Macdonald, an American, was behind this and there was some feeling among the other contestants that chauvinism may have played a part in keeping him from the pole position.

Macdonald'a project is also ready to be launcbed, having been promised very substantial finance. Significantly, his stay at Cranfield resulted from a desire to improve his management skills and a bellef that the UK was the best place to gain such expertise.

But by what seemed common consent, it was Bruce the Goose who emerged top in the affections of everyone involved in the presentation of the 16 final projects and in the judging. Bruce was a modest sized, locally-bougbt goose—or, to be precise, goaling—who had been cooked to form the visual centrepiece of a goose farming project presented by a lively Australian, Meredith Cheatley-Cox.

Not only was it one of the more bizarre enterprises presented over the eight years the ENV programme has been run at Cranfield, hut Meredith Cheatley-Cox had tbe distinction of heing the first woman to reach the final stage of the programme.

Thougb Bruce was of modest size—due to his tender years, but also hecause of the amount of fat that had melted away during the cooking—he fitted the bill in terms of Ms. Cbeatley-Cox's presentation. Her geese, she said, would with proper feeding have more meat, less fat, and would be much hetter value. Last seen clutching Bruce she let it be known that she had just heen promised enough money to start her goose farm down in the West Country.

According to Malcolm Harper, professor of enterprise development at Cranfield, the pretensions of those attending the courses in the five years he has heen in cbarge, have hecome more realistic and there are no longer any budding rivals to General Motors.

Based nn past experience, he says that between a quarter and a third of those who elect to take the ENV programme will, within six months or a year, be running their projects in more or less the form in which they had put it together at Cranfield. This year, apart from those already mentioned, projects included computer services for small businesses, an export agency to Latio America and do-it-yourself car repair facilitiea.

Another, based on an American concept (ideas imported from the U.S. provided the basis of several projects), was for a scbools fund-raising service based on the sale of magazine subscriptions. The project was put forward by Tony Kaye, wbo bad already had experience of a similar business. It involved bis company organising the sale by schoolchildren of subscriptiona to a wide variety of magazines. Kaye'a company and the acbools would eacb take a commission on the sales revenue.

About 30 companies wbicb began as ideas during Cranfield's ENV programme are still in business today. Last year's winner—a computer-based house register, called Homeline, for people buying and selling properties — has expanded rapidly. The 1978 winners are now trading as Curzon Travel, a travel agency, having got off the ground with financial backing from Yule Catto, the international plantations and trading group.

Nicholas Leslie

LOMBARD

The wrong sort of gradualism

BY ANTHONY HARRIS

THE GOVERNMENT must sometimes he puzzled hy the violence of the economic reaction to its policies. After all, the strategy set out in the medium term plan puhlisbed with the last Budget is supposed to be a messured and gradusl one. The PSBR se a proportion of GDP comes down only gradually over the five-year period; the monetary tsrgets are tightened only graduslly—and in fact, bave not even been achieved, by a wide margin. What, then is equeezing the life out of the economy?

Ministers, at a loss, turn and hlame the trade unions. If only wages were very much lower, and inflation was very much lower, everything would be lovely, they argue. Certainly things would in some ways he rather hetter. Inflation would he lower, profits bigher, the volume of exports might not he in danger of collapsing (for we have yet to suffer wbat may he in store here, as manufacturers work tbrough to the end of their existing order books); but 1 would suggest that we would still be in a pretty severe meso. The fact is that the economy is heing strangled by the strategy. Financial gradualism is no snswer to a world in which violent real events are taking place.

Dearer oil

The violent event in the real world is the rise in oil prices, and the eimultaneous development of our own resources of oil and gas. This amounts to a violent change in the *structure* of output. As recently ae 1976, these resources amounted to only half of one per cent of our national output. This year, following the rise in production and the rise in the price, they will contribute about nine per cent.

It is only a coincidence, though a rather telling one, that this year maoufacturing output will be down hy sbout nine per cent. Roughly speaking, under gradualist policies, we have *added* only about *balf* of oil output to our national income; the other half has been a straight substitution of oil for other forms of output.

Now a truly gradualist pollcy, I would argue, would have aimed to make this *adjustment* more gradual, and thus less disruptive. This would have meant finsncial policies aimed to offaet some of the impact of North Sea production on the prospects for other industries. One ohvious test might he the exchange rate; a policy which would have limited tbe oil-induced rise in the exchange rate would bave offered a financisl cushion.

One wsy of doing this, for example, might have been to use the proceeds of excessive gilts funding to huy foreign exchange for the reserves rsther than to oet up a fund to enshle the banking system to pawn its assets. (I owe this comparison, snd much of whst follows, to the latest Morgan Grenfell Review.)

This, however would be just as much an Alice in Wonderland strategy as the one the Bank has actually pursued—simply a way of undermining a damaging Government strategy by other means. The thing is to get the strategy right; and the starting point here is the balance of payments.

Borrowing

If we have learned one thing through 20 years of crisis, it is surely tbat the halance of payments is not oet hy tbe appreciation of the joys of exporting or even by our efficiency; these determine the level of activity at which we can halance our current account, but not the balance itself. That balance is simply the halance between national output and national expenditure; if you want to spend more than you produce you have to borrow. The borrowing which Goveroment controle is called the fiscal balance.

Now if there is no change io the current halance of psyments, then any improvement on oil account must, as a mstter of arithmetic, be halanced by an equal deterioration on the non-oil account. It is this substitutioo in our trade account wbich is causing such immense pain, and actually ensuring tbat non-oil activity is being depressed. Iodustry simply *cannot respond to a change* equal to 9 per cent of national income, and more than a qusrter of foreign trade, in just four years.

The conclusion is obvious, yet very bard for most people to swallow: s truly gradualist policy would have called for a much *tighter* fiscal policy.

Sony's challenge to the home movie

THERE ARE about 1½m Super 8 mm film cameras in Britain, mostly used for home movies of animated family groups who laugh without sound and speak without words. However, sound movies are creeping into popularity, using Super 8 mm film with a msgnetically striped aound track. But even though a very basic sound outfit of camera, projector and screen can be purchased for as little ae £250, the film will cost nearly £2 a minute.

Although even one minute of screen time can seem a long while, especially if cinematic creativity is in ehort supply, it is hardly surprisiug that home video cameras—with a running cost of under 8p a minute—offer great attractions to the consumer. They also allow tnstant replay of the recorded result without the inconvenlence and frustration of waiting for film to he processed. The snag with bome video is its capital cost, and the bulky equipment snd tangle of cahles involved.

Sony is now hoping to change all that. Last Friday, at the huge Photokina exhibition in Cologne, the first European glimpse was offered of Sony's new video recorder-camera. This development accomplishes the dream the electronics industry has been trying to turn into reality for a number of years.

Into one small, lightweight camera—no bigger than a Super 8 mm fim camera—Sony has managed to build a tiny videotape recorder, using cassettes of abont the same size ao pocket dictation machines. With self-contained batteries and built-in microphone, it is as simple to use as any Super 8 mm camera. The miniature cassette provides 20 minutes' recording time, and undoubtedly will cost substantially less than the 8p a minute of presentdsy videocassettes.

Despite the huge disparity in running costs, until now home video cameras have posed no serions challenge to Super 8 mm film. Domestic colour video cameras currently sell for shout £600; a figure that must he doubled when the price of the *recorder is added*. At over four times the total of a Super 8 mm sound outfit, home video is hardly a best huy. Moreover, recordings cannot be edited, the equlpment really is rather cumbersome and complicated, and the qusllty may he only just comparahle with 8 mm film.

What Sony bas now done is to demonstrate a system that promises to eliminate these remaining disadvantages when compared with Super 8mm film. The Sony recorder-camera could become available for sbout £500, complete with a separate editing unit. There are no cahles on the camera and it weighs only two kilograms. And the quality of the picture seen at Friday's Press conference, produced a response thst 1 have never known before: over 200 hard-bitten, suspicious, ungenerous sudio-visual journalists hroke into spontaneous applause

One of the secrets of the camera's success is its use of a CCD (charge coupled device) in plsce of the hulky, expensive and rather unsatisfactory electronic tube employed in conventional television cameras. The CCD chip is ont only extremely compact and lightweight, but it is free of the trqublesome image "smearing" prodnced by presentday video cameras—seen, for example, when panning across point sources of light.

The separate editing unit is utilised as a control and plsyback device when viewing recordings. At least balf to a third of the size of an average videocassette recorder, it has a special compartment into which the camera neatly fits. The recorder in the camera now functions as a playback unit, in conjunction with the circuitry and controls in the editing unit. All that is necessary is to connect the output to a domestic colour television set.

Alternatively the output may be fed into any conventional videocassette recorder. Thus connected, selected shots or "takes" can be transferred on to the larger videocassette, scene by scene. The "cuts" from one scene to another are clean and virtually invisible—an achievement that until recently has been possible only through the use of expensive eqnipment.

The sound can he edited similarly, so that the home movie enthusiast will he ahle to do all that was possible on Super 8mm film, probahly mnch more easily, and certainly much more cheaply. The system is still confined to the image sizes and quality constraints of any television system compared with film projection, but as equipment improves and viewing habits become more chairbound, this seems of diminiehing importance.

It is certainly infinitely easier to push a videocassette into a machine and wstch it on the television set than to get out the projector, screen and loudspeaker, line-up the image and then make sure that everyone is seated before switching off the lights in the cable-strewn room (broken fibulas are an attendant risk in home movie shows).

Sony is very cautious about marketing plans for this remarkable system. A possihle dste of 1984 or 1985 is mentioned, but first the company wishes to prevent a re-run of the standardisation nightmare which undoubtedly has hampered progress in the video business. Thus Sony is lifting the wraps earlier than usual "to establish a co-operative framework for compatibility — not only in the electronic industry, hut also in the photo*graphic industry." Talks* and agreements with other manufacturers — before rival and non-compatible systems get too far developed — are clearly an urgent priority for Sony.

Attention may be now focused on the Philips' and JVCs of this world (both of those companies are thought to have video recorder-cameras). Bot the 8mm movie business should be the first to worry. The amatenr cine business is already depressed and this will only get worse as video systems catch on, despite their drawbacks. Granads TV Rental hss just announced that more of its showrooms will be offering video cameras for hire on short-term rental — encouraged hy early results at 21 showrooms where the facility has been on offer since June.

When the Sony recorder-camera hits the market, the end of 8 mm movie-making aeems inevitable. For film stock manufacturers Kodak, this must present a serious problem. It certainly did for me in Cologne last Friday because the friendly and familiar faces of UK Kodak executives—including chairman Mr. Jim Moorfoot—were the first I met when 1 left the Sony stand. But they took the development philosophically and seemed more concerned at my inahility to open their foolproof Ektralite still camera (perhaps I was suffering from jet lag?).

Yet I am sure that Kodak will *survive this challenge*. Their executives know too much about the image recording business to be caught with their darkroom door open. But exactly how they will respond remains something of a mystery. Meanwhile, was it not perhaps rubbing salt in the wound when Sony decided for this new system to use videotape exactly 8 mm wide? I tried to restore the balance later hy taking a photograph of Mr. Bill Fulton, Sony UK's managing director, on the new Kodak Ektralite camera. But I hsve to wait a few days to see if the result is Chittock-proof.

FILM AND VIDEO

BY JOHN CHITTOCK

Sir Gordon should be suited

LADY BEAVERBROOK paid a compliment to her racing manager, Sir Gordon Richards, when sbe nsmed a strapping colt by Bustino after him but, aadly, the four-legged Sir Gordon has so far done little to justify the confidence reposed in him.

However, at least he stays, and the 1¼-miles of the Beevor Stakes (2.15) st Yarmouth today ought to auit him admirably.

Later in the afternoon, Paul Cook who rides Sir Gordon, partners Paleor in the Beccles Maiden Stakes (4.45). Like Sir Gordoo, Paleor has oot much in the way of finishing speed, but be too appears to have a comparatively simple task.

Cleat, who carries a 6 lb penalty as a result of a hard-earned victory at Windsor at the beginning of last week, turns out agsin in the Jack *Leader Memorial Challenge* Trophy Nursery Handicsp (3.15).

She is a tough filly and with M. Rimmer, who rides her so well claiming the 5 lb allowance, she is sure to go nicely, without perhaps, being sble to cope with Invests who was an easy winner at Leicester last month.

At Lingfield, Oldstock, follows a three-lengths third to Kampala and Blue Refrain in the Autobar Victoria Cup at Ascot at the end of April, and bas beeo weighted accordingly. He is set to carry 10 st in the Partridge Stakes (5.00). However, he ran hy oo means badly when fifth behind Galden Elder and Be Better in the Drayton Handicap at Goodwood (he was trying to give them 6 lbs and 9 lbs respectively) so his class may carry him to victory here.

Sule Skerry, who has disappointed her connections twice since winning well at Brighton in July, performed satisfactorily when dividing Teresilla and Hearth at Windsor eight days' sgo. She can go one better in the Oval Handicap (4.00).

RACING

BY DARE WIGAN

LINGFIELD

3.00—Kiss The Clowns
*4.00—Snle Skerry**
4.30—Tsar's Bride
5.00—Oldstock

YARMOUTH

2.15—Sir Gordon***
3.15—Investa
4.15—Alteza Real
4.45—Paleor**

TV/Radio

BBC 1

† Indicates programme in black and white.

6.40-7.55 am Open University (Ultra high frequency only). 12.45 pm News. 1.00 Pebble Mill at One. 1.45 Trumpton. 3.20 Trem. 3.53 Regional News for Eogland (except London). 3.55 Plsy School (as BBC-2 11.00 am). 4.20 Laurel and Hardy cartoon. 4.25 Puzzle Trail. 4.40 Play Away. 5.05 John Craven's Newsround. 5.15 Stopwatch.

5.40 News.
5.55 Nationwide (London and South East only).
6.20 Nationwide.
6.55 The Tuesday Film: "Doc Savage—The Man of Bronze," starring Ron Ely.
8.30 Wildlife on One.
9.00 News.
9.25 Fair Stood the Wind for France.
10.25 The Miracle Workers: Germany and the Germans.
10.55 Invitation to the Dance: "Dreams," music by Richard Wagner, choreography by Heinz Spoerli, danced by members of the Basle Theatre Ballet.
11.25 Weather/Regional News.

All Regions as BBC-1 except as follows:—

BBC Cymru/Wales—1.45-2.00 pm Heads and Tails. 5.15 Bilidowcar. 5.35-5.40 Yr Awr Facb Facb. 5.55-6.20 Wales Today. 6.55 Heddiw. 7.15 Gair I Gall. 7.40-8.30 Codename "Erika." 11.25 News and Weather for Wales.

Scotland—12.40-12.45 pm The Scottish News. 5.55-6.20 Reporting Scotland. 11.25 News and Weather for Scotland.

Northern Ireland—3.53-3.55 pm Northero Ireland News. 5.55-6.20 Scene Around Six. 10.55 Soccer. The European Cup Winners Cup: Newoort County v Cruoaders. 11.35 Grand Opera House: "Gala Re-opening," scenes from Last night's extrevsganza at the Belfast Grand Opers House. 12.25 am Newo and Weather for Northern Ireland.

England—5.55-6.20 pm Look East (Norwicb); Look North (Leeds, Newcastle); Look North-west (Manchester); Midlando Today (Birmingham); Points West (Bristol); South Todsy (Southampton); Spotlight South West (Plymouth).

BBC 2

6.40-7.55 am Open University.
11.00 Play School (as BBC-1 at 3.55 pm).
4.00 pm Music Time for Teachers.
4.50 Open University.
6.55 Sable Island.
7.25 Mid-evening News, including sub-titles.
7.35 Roots of England.
8.05 My Music.
8.30 Top Gear.
9.00 Butterflies.
9.30 Twenty-five Years of Not the Nine O'clock News.
10.00 Darts: The Unipsrt World Team Matchplay.
10.45 Newsnight.
11.30 Darto (continued).

LONDON

9.30 am South West Australia. 9.45 Plain Speaking. 10.40 Vikings of the Sunrise. 11.30 The White Stone. 12.00 Paperplay. 12.10 pm Pipkins. 12.30 The Sullivans. 1.00 News, plus FT Index. 1.20 Thames News. 1.30 Crown Court. 2.00 Here Today. †2.25 Tueoday Matinee: "Non-Stop New York." 3.45 Food, Wine and Friendo. 4.15 The Sooty Show. 4.45 The Square Leopard. 5.15 Emmerdale Farm.

5.45 News.
6.00 Thames News.
6.25 Help!
6.35 Crossroads.
7.00 Charlie's Angels.
8.00 Cooper's Half Hour.
8.30 Arthur C. Clarke's Mysterious World.
9.00 Born and Bred.
10.00 News.
10.30 Spitfire MH 434.
11.45 Guinness Golden Darts.
12.15 Close: "Sit Up and Listen," with Lord George Brown.

All IBA Regions as London except at the following times:—

ANGLIA

5.35 am Who's Afraid of Opera? †10.00 Tuesday Morning Film: "Quartet." 12.30 pm The Riodans. 1.20 Anglia News. 2.25 Poetry of Landscape. 2.45 Chopper Squad. 5.00 About Anglia. 7.00 B.J. and the Bear. 10.30 The Primodos Affair. 11.45 Fantasy Island. 12.40 am Minor Meditations.

ATV

9.55 am Sailaway. 10.15 Morning Cinema: "Fire Down Below," starring Rita Hayworth, Robert Mitchum and Jack Lemmon. 12.30 pm The Riordans. 1.20 ATV News. 2.25 The Tuesday Movie: "Offbeat." 5.15 Survival. 5.00 ATV Today with ATV News. 6.05 Crossroads. 6.30 ATV Today. 7.00 Emmerdale Farm. 7.30 England, Their England. 11.45 ATV News. 11.50 Saretta.

BORDER

9.35 am Who's Afraid of Opera. 10.00 Treasures in Store. 10.25 World Worth Keeping. 10.50 Portrait of the Artist. 11.05 Tarzan. 1.20 pm Border News. 2.25 Tuesday Matinee: "Hey, I'm Alive." 5.15 Survival. 6.00 Lookaround Tuesday. 7.00 Emmerdale Farm. 7.30 Love Thy Neighbour. 11.45 Kez. 12.40 am Border News Summary.

CHANNEL

12.30 pm The Riordans. 1.20 Channel Lunchtime News; What's On Where and Weather. 2.25 TV Movie: "A Summer Without Boys." 5.15 Doctor Down Under. 6.00 Channel Report. 7.00 Dartmoor. 7.30 Plymouth Rock. 10.28 Channel Late News. 11.45 Paris. 12.40 am Commentaires et Prévisions Météorologiques.

GRAMPIAN

5.25 am First Thing. 9.30 The Human Face of China. 10.00 Treasures In Store. 10.25 A World Worth Keeping. 10.50 Portrait of the Artist. 11.05 Chopper Squad. 12.30 pm The Riordans. 1.20 North News. 6.00 North Tonight. 7.00 The Electric Theatre Show. 7.30 Doctor Down Under. 11.45 Reflections. 11.50 Wilderness Alive. 12.45 North Headlines.

GRANADA

8.30 am The Flintstones. †10.00 "Target for Tonight." 10.45 Cartoon Time. 11.00 Sesame Street. 12.30 pm The Riordans. 1.20 Granada Reports. 2.25 Tuesday Matinee: Barbara Eden In "How to Break up a Happy Divorce." 5.15 Diff'rent Strokes. 5.00 Granada Reports. 5.30 This Is Your Right. 7.00 Emmerdale Farm. 7.30 Doctor Down Under. 11.45 The New Avengers.

HTV

†10.10 am Tuesday Morning Movie: "Our Man in Havana," starring Alec Guinness. 12.30 pm The Riordans. 1.20 HTV News. †2.25 "Nor the Moon by Night," starring Belinda Lee, Michael Craig and Patrick McGoohan. 5.15 Cartoontime. 5.20 Crossroads. 6.00 Report West. 6.30 Definition. 7.00 Emmerdale Farm. 7.30 Doctor Down Under. 10.28 HTV News.

HTV Cymru/Wales—As HTV West/HTV General Service except: 12.00-12.10 pm Flalabalam. 4.15-4.45 Sbarduh. 6.00 Y Dydd. 6.15-6.30 Report Wales. 10.30-11.40 Ffilmiau'r 70au.

SCOTTISH

9.30 am Sabel Yamen. †10.05 Feature Film: "Crest of the Wave," starring Gene Kelly. 11.30 Bygones. 12.30 pm The Riordans. 1.20 News and Road and Weather. 12.25 Tuesday Feature: "Offbeat." 5.15 What Happened Next. 5.20 Crossroads. 6.00 Scotland Today. 6.30 What's Your Problem? 6.20 Job Spot. 7.00 Emmerdale Farm. 7.30 Doctor Down Under. 11.45 Late Call. 11.50 Arrivederci Grimethorpe.

SOUTHERN

5.30 am Sport For All. †10.00 "Light Up the Sky," starring Ian Carmichael. 11.30 The Lost Islands. 12.30 pm The Riordans. 1.20 Southern News. 2.25 "Murchason's Creek." 6.15 The Undersea Adventures of Captain Nemo. 5.20 Crossroads. 6.00 Day By Day. 7.00 Emmerdale Farm. 7.30 Three's Company. 11.45 New Avengers.

TYNE TEES

9.20 am The Good Word followed by North-East News Headlines. 5.30 The History of the Motor Car. 10.00 George Hamilton IV. 10.20 Adventure Canada. †10.45 Morning Movie—"The Angel Who Pawned Her Harp," starring Diana Cilento. 1.20 pm North-East News and Lookaround. †2.25 Tuesday Matinee—"Terror on a Train," starring Glenn Ford. 5.15 Diff'rent Strokes. 6.00 North-East News. 6.02 Crossroads. 6.25 Northern Life. 7.00 Emmerdale Farm. 7.30 Survival. 10.30 North-East News. 11.30 Next Step Beyond. 12.15 am Things Worth Having.

ULSTER

9.40 am Spiderman. 10.00 Treasures In Store. 10.25 A World Worth Keeping. 10.50 Portrait of the Artist. 11.05 Chopper Squad. 1.20 pm Lunchtime. 2.25 Tuesday Matinee: "Contraband Spain," starring Richard Greene, Anouk Aimee and Michael Denison. 4.13 Ulster News. 5.15 Cartoon Time. 5.20 Crossroads. 6.00 Good Evening Ulster. 7.00 Emmerdale Farm. 7.30 Hotspot. 10.29 Ulster Weather. 11.45 Gardening Today. 12.10 am Bedtime.

WESTWARD

10.00 am Treasures In Store. 10.25 World Worth Keeping. 10.50 Portrait of the Artist. 11.05 Chopper Squad. 12.30 pm *The Riordans*. 1.20 *Westward* News Headlines. 2.25 TV Movie: "A Summer Without Boys." 5.12 Gus Honeybun's Birthdays. 5.15 Doctor Down Under. 5.00 Westward Diary. 7.00 Dartmoor. 7.30 Plymouth Rock. 10.31 Westward Late News. 11.45 Paris. 12.40 am Faith For Life. 12.45 West Country weather, shipping forecast.

YORKSHIRE

9.30 am The Coral World. 10.25 Comic Stories. †10.30 The Crazy Gang In "Okay For Sound." 11.55 The Bubblies. 12.30 pm The Riordans. 1.20 Calendar News. 2.25 *Tuesday Matinee*: "In Name Only." 3.45 Calendar Tuesday. 6.15 Life Begins At Forty. 0.00 Calendar (Emley Moor and Belmont editions). 7.00 *Emmerdale* Farm. 7.30 Survival. 11.45 Champion of Champions. 12.15 am Run From The Morning.

RADIO 1

(S) Stereophonic broadcast
‡ Medium Wave

5.00 am As Radio 2. 7.00 Dave Lee Travis. 9.32 Simon Bates. 10.32 Andy Peebles. 12.30 pm Newsbeat. 12.45 Paul Burnett. 2.32 Simon Bates (part 2). 3.32 Peter Powell. 6.31 Talkabout. 7.31 Mike Read. 10.02 John Peel (S).

RADIO 2

5.00 am News Summary. 5.03 Steve Jones (S). 7.32 Terry Wogan (S). 10.03 Jimmy Young (S). 12.03 pm David Hamilton (S). 2.03 Ed Stewart's Request Show (S). 4.03 Much More Music with Joan Challis (S). 0.03 John Dunn (S). 8.02 Hooray For Hollywood. 9.02 Glamorous Nights (S). 9.55 Sports Desk. 10.02 Windsor Davies Presents . . . The Multi-National Eisteddfod Show. 10.30 Those Magical Movie Musicals: "Seven Brides for Seven Brothers." 11.02 Peter Clayton with Round Midnight, including 12.00 News. 2.02-5.00 am You and the Night and the Music (S).

RADIO 3

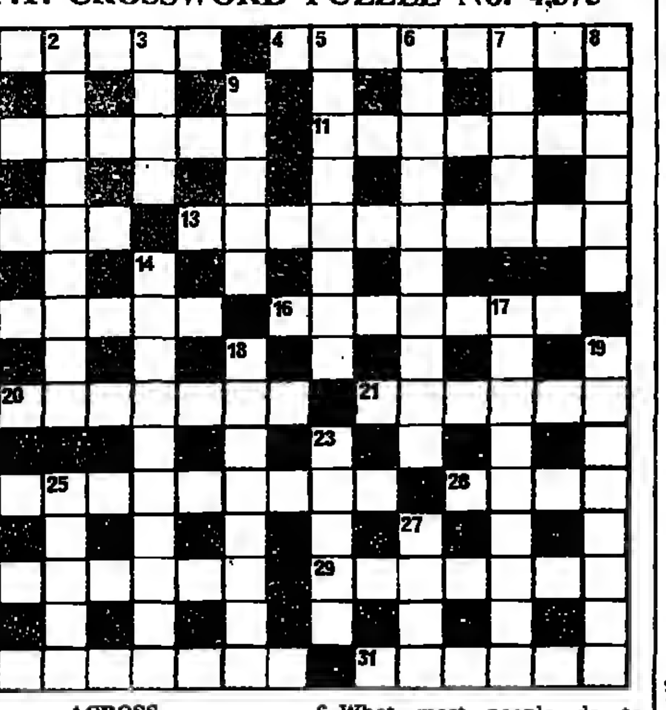
‡6.55 am Weather. 7.00 News. 7.05 Overture (S). 8.00 News. 8.05 Morning Concert (S). 9.00 News. 9.05 This Week's Composers: The Stamitz Family (S). 9.55 Joseph Norman song recital, part 1 (S). 10.50 Interval Reading. 10.55 Recital, part 2. 11.40 London Saxophone Quartet (S). 12.10 pm Cardiff Midday Prom, part 1 (S). 1.00 News. 1.05 Six Continents. 1.25 Midday Prom, part 2 (S). 2.05 Arnold Bax songs (S). 3.10 Two For One (S). 3.50 Rubbra recital (S). 4.25 Jazz Today: Charles Fox with records (S). 4.55 News. 5.00 Mainly For Pleasure (S). († and mono only from 6.20.) 7.00 The English Ayre (S). 7.30 Royal Liverpool Philharmonic Orchestra concert, part 1 (S). 8.20 Geoffrey Bush (autobiographical talk by the composer). 8.40 Concert, part 2 (S). 9.25 Doctor Fischer of Geneva by Graham Greene. 9.45 Mozart (S). 10.00 Music In Our Time (S). 11.00 News. 11.05-11.15 Delius (S).

VHF ONLY—Open University 6.00-7.00 am and 6.20-7.00 pm; and for students in Radio Scotland and Radio Cymru areas only: 12.00-1.00 am.

RADIO 4

6.00 am News Briefing. 6.10 Farming Today. 6.25 Shipping Forecast. 6.30 Today, including 6.45 Prayer for the Day. 7.00, 8.00 Today's News. 7.30, 8.30 News Headlines. 7.45 Thought for the Day. 8.45 The Wheels of Chance. 9.00 News. 9.05 Tuesday Call: The BBC Director General, Sir Ian Trethowan, answers your questions. 10.00 News. 10.02 Medicine Now. 10.30 Daily Service (S). 10.45 Story Time. 11.00 News. 11.05 Thirty-Minute Theatre. 11.35 Wildlife. 12.00 News. 12.02 pm You and Yours. 12.20 Down Your Way visits Orford in Suffolk. 12.55 Weather; programme news. 1.00 The World at One. 1.40 The Archers. 1.55 Shipping Forecast. 2.00 News. 2.02 Woman's Hour. 3.00 News. 3.02 Listen With Mother. 3.15 The Golden Bowl by Henry James (S). 4.10 Origins. 4.40 Announcements. 4.45 Short Story. 5.00 PM. News magazine. 5.50 Shipping Forecast. 5.55 Weather; programme news. 6.00 News. 6.30 Top of the Form. 7.00 News. 7.05 The Archers. 7.20 A Victorian Music-Hall (S). Part 1. 8.25 Odyssey. 9.10 In Touch. 9.30 Kaleidoscope. 9.59 Weather. 10.00 The World Tonight. 10.30 Max Wall at the Royal Court (S), part 2 of a benefit evening recorded at the Royal Court Theatre. 11.00 A Book at Bedtime. 11.15 The Financial World Tonight. 11.30 Claudio Arrau (piano) plays Beethoven, Schubert, Schumann, Liszt. 12.00 News.

F.T. CROSSWORD PUZZLE No. 4,375



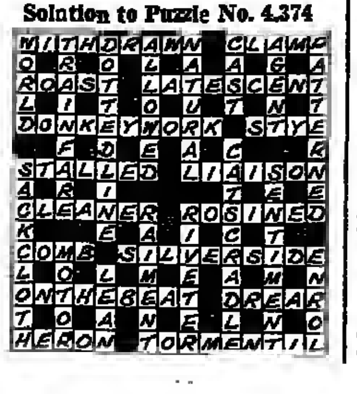
ACROSS

1 Feeling eeedy in fioh shop? (6)
4 Very good kind of report (8)
10 Deserter hy a wide margin (7)
11 Lions MP confounds in mountaln tunnel (7)
12 See extract from written evidence (4)
13 Jealousy endo our respect for judge's address (4, 6)
15 Contact youth leader, over-sensitive (6)
16 Act for each class (7)
20 Clansman with skill in the kitchen (7)
21 Credit a doctor with circular word game (6)
24 Doorman to entrance with beer (4, 6)
26 Break up card game (4)
28 Savings encouraging lsyer (4-3)
29 Expedition blending oil in N. Africa (7)
30 Found the solntion again determined (8)
31 Self-starter always placed hy egg-head io stern (6)

DOWN

1 Conference action — from the delegates' hearts? (4, 4)
2 Certain pub has no suspicion (2, 2, 5)
3 Tool to handle roughly over pole (4)
5 Ordered to shy (8)
6 What most people do to vulgar fashion (6, 4)
7 House unlikely to bave a fridge (5)
8 Information a long time reaching classes (6)
9 Church meeting makes Sidney's extremities drop off (5)
14 Appear fit to give a good impression (4, 2, 4)
17 A prominent feature in Corialanus (5, 4)
18 Paid ocoundrel to adjourn (8)
19 Include company member getting more psy (8)
22 Polish expert with black eye (6)
23 Fast time ought to he slow time (5)
25 Rolls into combat ground (5)
27 Family railway business (4)

Solution to Puzzle No. 4,374



ENTERTAINMENT GUIDE

OPERA & BALLET

[illegible]

THEATRES

[illegible]

CINEMAS

[illegible]

ART GALLERIES

[illegible]

CLUBS

[illegible]

THE ARTS

Old Vic

Ariel

by ANTONY THORNCROFT

Ariel, Shakespeare's Sweet Power and Music, which received its British premiere at the Old Vic on Sunday, sounds predictable enough: those famous lyrics—"Where the bee sucks"; "Full fathom five"; etc.—performed delicately on the lute to the accompaniment of scenes from some of Shakespeare's lighter comedies. Martin Best's *divertissement* is not at all like that. Developed in the U.S., for an affiliate of the Association for Creative Theatre, Education and Research, it is a much more portentous event, no less than an attempt to score Shakespeare as a dramatic symphony, a symphony on the lines of Mahler rather than Mozart.

The starting point is fine—linking Shakespeare's obsession with harmony in the body politic with the harmony of the spberes and the barmony of music, an acceptable 16th century theme and one often evoked in the plays. So after a few quotations, the key being "The man that hath no music in himself, Nor is not moved with concord of sweet sounds, Is fit for treasons . . ." we have the scene from *Lear* where the Fool attacks the King for relinquishing his appointed powers and bringing chaos to the state. And so it goes on, not pretty lute melodies but dramatic tableaux, ascending movements of a turbulent musical score. The ghost scene from *Homlet* is given *Misterioso con moto* while from *Julius Caesar* comes the *Douse Macabre*.

It is a pretentious idea which works surprising well, though not always in this particular production. The four actors — Sebastian Sbaw, John Woodvine, Ann Firhank and John Nettles — steeped in the Shakespearian tradition, do their bit stoutly, but the addition of a chorus of eight young actors (?), singers (?), be-jeaned and cross-legged on the edge of the stage, wbo occasionally make dolphin-like noises and once crawl across the boards as if searching for a pin, add little. The programme discloses the fact that they represent "planet music," but what might be acceptable in a studio production is ont of place at the Old Vic. Martin Best orchestrates the performance with lute and 12-string guitar, the former representing "earthly music," the latter "beavenly." It all sounds very significant but works best as scenes from Shakespeare by the professionals. The excerpts from *Two Gentlemen of Verona* and *Twelfth Night* are particularly effective, and the whole venture remains ripe for development.

Regional base for National Theatre

The National Theatre has acquired a regional base, the Theatre Royal in Bath, to act as the centre for its intensified touring policy. In 1982 it hopes to use the theatre for the launch of medium-sized productions which will subsequently move to the Lyttelton and Cottesloe and to provincial theatres.

This new policy depends on the success of a £2.5m appeal launched yesterday by the Theatre Royal to raise money to improve its antiquated back stage and front-of-house facilities. The stage improvements will be designed to the National's requirements and are a major reason for the link between the two theatres. The Arts Council has promised £400,000 towards the appeal and the local council is expected to contribute another £400,000.

The Theatre Royal was opened in 1805 and restored after a fire, in 1862. The renovations are to the plans of Dennis Lennon, an experienced architect in the theatre, and will attempt to re-create the Regency look in what is considered to be one of the most intimate and attractive theatres in the country. Its very intimacy —it seats 615 with anotber 250 in the gallery—makes it a difficult financial proposition, although in the past 18 months, during which it has been run as a charitable trust, the commercial situation has improved, with attendances up 27 per cent this year.

If the plans reach fruition the Arts Council will double its support for National Theatre touring to £400,000 a year. The idea is very much in line with its aim of identifying a national company with a regional centre —the RSC at Newcastle; the ENO in Leeds; the WNO at Birmingham and now tbe Royal Opera at Mancbester are examples—and supporting local theatres by helping financially touring companies to visit them.

Sir Peter Hall, director of the National Theatre, said in Bath yesterday that he hoped to open two productions a year at the Theatre Royal and also to exploit the connection betweeo the social traditions of the spa with the English talent for social comedy in its drama. He would also like the National to perform there during the annual Bath Festival.

A. T.

Riva

Prix Italia

by CHRIS DUNKLEY

Britain's unrivalled reputation among the world's producers of quality television bas been sustained and burnished bere by the awarding of the Prix Italia for music to London Weekend Television for the South Bank Show profile of Benjamin Britten, *A Time There Was*.

The programme, directed by Tony Palmer, uses reminiscence, archive film, interviews, and music to explore the life and work of the composer. It won the prize of SwFr 18,000 against competition from 20 other programmes submitted by 17 countries, including France, Germany, Italy, America, Russia, Poland and Hungary.

The award means that Britain's record of winning more Italia prizes than any other nation in the 32-year history of the festival is strengthened still further. The prize also enhances the ITV claim to making better music programmes than the BBC, which has never won this category. ITV has now won it three times in recent years, the South Bank Show also winning last year.

The "special" (actually second) prize was awarded to Germany's *Elegies on the Deaths of Three Spanish Poets*, which was prodnced by ZDF Television, but directed by British freelance Christopher Nupen.

Ephemera award

The first annual award of the Epbemera Society's Samuel Pepys Medal has gone to Marcus Allen McCorison, director and librarian of the American Antiquarian Society. Pepys is regarded as the earliest known collector of printed epbemera. The annual award has been made possible through the aid of Wiggins Teape.


Kennington's "Back to Billets" (left) and "Sgt. Eriksen"

Imperial War Museum

Eric Kennington

by DAVID PIPER

The visitor approaching the portico of tbe Imperial War Museum, a building that once boused Bedlam, bospital for the insane, may well feel some unease, almost as if a bird driven toward the butts. Twin barrels of a huge naval gun confront blm with a mute but possibly loaded welcome. Provincials who come to the metropolis bent on art—and indeed I suspect many art-loving Londoners—are prone to neglect this museum, lurking, as it seems to on the map, in the binterland of the south bank (though in fact as accessible by Tube as the Tate). And the crowd-catching element is of course the museum's prime subject matter, war and the bric-a-brac of 20th-century war: weapons, uniforms, medals, the glory and the pity of two great global bolocausts. You will find old men with memories in this museum, and small boys for wbom 1945 is as remote as Arthurian legend. But the picture galleries begin once again to attract a different interest, visitors interested in art as much as if not more than in the specific range of subject matter of the art shown bere, though at its best the two are of course inextricable. In fact some of the best Britisb figurative painting of two generations is to be seen bere, an achievement sparked by the imaginative creation of the grade of Official War Artist in 1914/18 and 1939/45. It is no bad thing once in a while to have a common theme imposed on an exhibition of markedly divergent styles. Here Sargent's huge *Gassed* (mnch underrated still) offers an extraordinary transposition of the High Victorian "processional" theme, so loved by artists like Leighton, into "recessional," draped or garlanded maidens replaced by the frieze of blindfold soldiers in khaki, stumbling in line, each man with a hand on the shoulder of the man in front. Contrast that with Wyndbam Lewis at bis most effective with soldiers articulated like mechanical ants or mantis. There is Paul Nash, Nevinson, William Roberts. From the second war: Moors with shelter drawings and welsb miners; Sutherland with those tiny distillations of landscapes, incandescent as the heart of a fire, and many less well known artists of a quality demanding reassessment. And thousands more in store.

For the current temporary exhibition (until September 28) an artist who was involved in both wars has been taken out and given solo space: Eric Kennington, who died in 1960. He was well enough known hy the end of the first war, and then, in the "interval," to his widest audience perbaps by his illustrations for T. E. Lawrence's *Seven Pillors*. In 1914-15 he had served in the infantry in the ranks, and to his direct, involved and very first hand experience of the fortitude and suffering of the ordinary soldier much of tbe immediacy and the strength of bls first war work must derive. At his best, especially in some of the drawings shown in this exhibition, his portrayals of men sbaped by the rigour of war, pared to the essence, answer worthily the austere passion that found expression in the greatest of the war poets, Wilfrid Owen, rather than in the sincere yet somehow indulgent beroics of Rupert Brooke's famous sonnets. There is bere an hallucinatory contre-jour study of a figure seen from within the gloom of a dugout, offering tea from the entrance steps above to those inside. The cup bearer: without any histrionics, it lifts the most mundane commonplace to a sacramental level. At this stage, Kennington was using soft cbalk and pastel, almost paradoxically, almost to carve the planes of a face on to paper as if by a chisel on to stone. His use of pastel was original, in the highlights sometimes suggesting light itself had taken substance on a cheekbone like a powdering of snow, at others suggesting more a mortal dust settling after an explosion. The modelling though always suggests the sculptor, and wben Kennington came, in the '20s to war memorial commissions, the results though variable were at their best of moving and expressive gravity. They are shown here mainly by pbotography, but there are also two maquettes. The bronze one for the Battersea Memorial to the 24th Division presents three standing figures, compresseo, almost welded into one another. An image that conveys a stubborn patience, a formidable confrontation with the unknown, the loneliness of death and yet also a great sense of solidarity. It has something of the coocentration, the arresting awkward gravity of tbe famous Byzantine group of the porphyry Tetrarchs clutched together, at Venice.

The exhibition, drawn entirely from the Moseum's own holdings, focusses of course on Kennington as war artist, and so his sculpture and his oil portraits are not fully represented. In fact he achieved some remarkable "lasts" (as distinct from "firsts"). His recumbent effigy of Lawrence, that after some vicissitudes fouod a resting place at St. Martin's, Wareham, is not only in Arab gear, but must be one of the very few such memorial effigies to have been made since 1918 (Kennington bad planned a hook on medieval effigies and brasses together with Lawrence before the latter's death). The statue of Thomas Hardy at Dorcbester — Hardy in old age seated high on a pedestal hut comfortably in knickbockers — must be the latest (and last?) lifesize statue of a contemporary poet to he erected in Britain. These are of course not shown bere, but bis sculpture generally did not sustain the essential simplicity achieved earlier, and one of the reasons for tbe recent neglect of his work is an undeniable dilution of his imaginative powers in his later work: inflation, almost.

In the Second World War, Kennington obviously missed that direct, involved contact with the ordinary rank and file of the armed forces in action. Portrait studies of top brass there are, but the habit of drawing his heads over life size tends to become a mannerism lacking an inner justification, and tbe simplification of his modelling leads to beroics that can resemble the glamour of Hollywood aod technicolor. There is a pastel of a young Norwegian pilot in 1942, radiant, almost fluorescent, with a quite impossible blonde beauty. On the other hand, the head of Lord Halifax in 1940, larger than life, is of a fascinating subtlety, conveying very movingly in its shadowings the decent, responsible, repressed *angst* of that harassed statesman in the baffling openiog stages of the war. It is, though, to the haunting images of the First World War that the visitor will return. The drawing of Morris Clifford Thomas in *Tin Hat* (a study for one of the beads in the Battersea Memorial) is a triumph of compression and strength. Tbere are also some landscape studies in pastel, ooe of 1918 ancestors of Nissen huts in snow, of unexpected delicacy, but it is the men that matter. In comparison with Kennington's best work of this period, that of most other war artists, however brilliant at painting, seems wide of the beart of the matter, missing the essence of the hnman drama.

Wigmore Hall

Elly Ameling

by ANDREW CLEMENTS

The neutral quality of Elly Ameling's voice—clean and smooth throughout the range, lacking any disfiguring tics—is necessarily only the starting point for her performances. Characterisation must be superimposed; colouring acquired. From such superb basic equipment there are *many* fine interpretations to be wrought, but equally the dividing lines between blandness and serenity, archness and sophistication, are thin indeed.

For almost all of ber recital in the Wigmore Hall on Sunday Miss Ameling contrived to keep to the more desirable sides of lbese divides. Her pianist was Rudolf Jansen, equally careful, equally halanced, occasionally lapsing into the prosaic; failing for instance, to make the most of the postludes to Schumann's *Liederkreis* Op. 39 (the Eichendorff settings). Miss Ameling sang mnch of that cycle simply and effortlessly: art disguising art for once seemed an appropriate description. Occasionally an odd stress surprised, as though the effort to make tbe most of the rhyming patterns bad been overdone; in some songs also—in "Intermezzo" and the otherwise sublime "*Mondnacbt*" — the tempo seemed unduly stately.

Berg's *Seven Early Songs* are perbaps unfamiliar Ameling territory—she included one of Schoenberg's Cabaret Songs as encore as well. The voice is not quite appropriate for sucb ripely romantic effusions as these, tbough Berg's taste in late 19th-century German poets was refined; the occasional spread of tone (even a momentary loss of control at the close of "Die Nachtigall") and expressive bulge suggested slight uncertainty. But everything else was in its place, immaculately pbrased and articulated: the line "Weitea Wunderland ist aufgetan" in the first song "Nacht" was a textbook example of how to weight a pbrase.

Yet there were still surprises. A group of four Spanish songs, by Granados, Guastavino (the marvellous "La rosa y el sauce") and Turina, brought forth *sharp*, vivid images, complete involvement in apparently foreign worlds of expression. Miss Ameling did not seem like a Dutch lady singing Spanish songs; the assumption was totally convincing.

New edition of 'History of Mankind'

Twenty-eight eminent historians, scientists and cultural experts representing all the regions of the world bave been meeting at Unesco's Paris headquarters to set under way a large-scale project: a new, revised and expanded edition of the *History of Monkind, Scientific and Cultural Development*. A first edition of this work was prepared under Unesco auspices in the fifties and sixties by a first international commission (wound-up in 1969) beaded by Professor Paulo E. de Berrêdo Carneiro and aided by 1,140 specialists wblch spent nearly 20 years on lhe task.

Following a call for a new edition by the 1978 general conference of Unesco the director-general set up a second commission, again beaded hy Professor Carneiro. Since last year, it has been aided by 120 specialists from all regions of the world whose task was to make a critical examination of the first edition. They have begun to work out their criticisms and suggestions and send tbem to the commission wbich will now decide what changes and corrections should be made as well as the priority to give to new themes and new volumea of tbe bistory.

Siena

37th Settimana musicale

The Accademia Chigiana—first the private creation of Count Guido Chigi Saracini, then after his death a Foundation, since 1961—has never had a great deal of money; and its annual festival, the Settimana musicale senese, has always been known as much for its ingenuity and economy as for its musical excellence. Associated with the summer courses of the Accademia, the festival has been able to exploit the presence of distinguished teachers and, at the same time, put the most gifted students to use.

The 37th Settimana senese, wbich ended last weekend, thus was able to feature the pianist Bruno Canino (in a programme of John Cage works for prepared piano), as well as the violinist Salvatore Accardo, the violists Bruno Giuranna and Piero Farulli, and the 'cellist Alain Meunier. A concert entitled "Chigiana novità" included a series of world premieres, among them a piece by the Accademia's professor of composition Franco Donatoni. And there were also some distinguished guests: Leonid Kogan, Pierre Boulez, Luciano Berio (who has a summer house in the province of Siena).

Traditionally, the Settimana mounts at least one stage work. In the past there have been memorahle performances of operas by Haydn, Gluck, Vivaldi, Rossini. Inevitably, with steeply rising costs, these productions become more and more difficult to arrange within the Chigiana's budget. And so, in the staging of this year's production of Emilio de' Cavalieri's *Roppresentazione di Animo e di Corpo*, there was some evidence of economy. There was also, unfortunately, considerable evidence of want of inspiration.

The production was under the banner of the group called Bussottiopera-ballet, an all-purpose group assembled by the composer-designer-director Sylvano Bussotti, largely for the presentation of his own works. The group's—and its founder's—pretentions are, so to say, far greater than their talents.

Originally, Bussotti wanted to present Cavalieri's work in a church (after all, its original production, in 1600, has been in the Oratorio of Saint Philip Neri in Rome); but—according to Sienese gossip—the Bishop got wind of Bussotti's production plans, which included a good deal of nudity, and put his foot down. The performance was shifted to the secular Teatro dei Rinnuovati.

The Bishop was right. The nudity was, in fact, gratuitous, and characteristic of the whole staging, which had a random, unfocused quality. There are a number of indications of how the Cavalieri work was staged in its day (including the preface to the first printed edition, also in 1600); but Bussotti chose to ignore them. In the drama there is one scene where nudity *is* required: the two emblematic characters, World and Wordly Life are stripped, to reveal, beneath their sumptuous exteriors, horror and death. Here, Bussotti confined himself to removing World's cloak and Worldly Life's head-dress. No revelation, therefore, and no *coup de scène*.

After the Prologue, spoken in a gabbled sing-song by a couple of petulant actors, the production consisted mostly of singers in elaborate, tinselly costumes (by Bussotti), standing still and singing, while mimes and dancers minced and posed and pranced around the rest of the stage to no visible purpose or pattern. Behind them some inapposite painted drops by Tono Zancanaro (Bussotti's uncle) were unfolded or rolled up at iotervals.

And yet the *Rappresentozione di Anima e di Corpo* (as the old Deutsche Grammophon recording proved) is a fascinating work, so fascinating that even this absurd presentation could not totally vitiate its effect. The Gruppo Recitar Cantando, an assembly of players of old instruments, conducted from the bapsichord by Fausto Razzi, played well; and even though Razzi's tempos were of an unrelieved stateliness, musically the performance flowed. Piero Cavalli's Madrigal Studio chorus —seated to the rigbt of the stage —also sang with an admirable accuracy and expressive range. Many of the vocal soloists were also on a high level, in particular the soprano Cecilia Valdenassi (as the serenely triumphant Soul) and the contralto Gloria Banditelli as Intellect. Among the men, the always-reliable Ugo Trama used his dark, hass voice with skill and style in a series of parts: Time, World, and Damned Soul; while the counter-tenor Richard Berkeley-Dennis looked uncomfortable as the Guardian Angel, but sang persuasively.

WILLIAM WEAVER

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Tuesday September 16 1980

The imported recession

IN THE LAST two years real personal incomes have risen more rapidly than at any time since the 1971-73 recovery; yet while in the earlier period industrial production was rising at an annual rate of more than 5 per cent, we are on this occasion entering what could well prove the severest recession since the war. The output figures published yesterday confirmed that, in the second quarter, industrial output was 5½ per cent lower than the average for 1979, and still falling quite rapidly in July. In the 1975 recession, the trough was 7 per cent below the previous year.

For output apart from oil, of course, the picture is even worse. Manufacturing is already 7 per cent below last year's average, and well below its 1975 trough; for all non-oil activity, the level is about the same as the worst in the previous recession, with a further fall in July, and much evidence to suggest a still worse performance subsequently.

Retail sales

We have become so accustomed, in the post-Keynes era, to think of the productive economy as being driven by the level of demand that this enormous divergence between incomes, spending and output is hard to grasp. Part of the explanation lies in changed behaviour; real consumer spending on all goods and services has grown only half as fast as real incomes. There has also been a strong response to the sharp changes in relative prices; spending in the shops, as opposed to spending on housing, transport and so on, has been stagnant for two years, as new figures again confirmed yesterday.

However, this changed behaviour ise not itself enough to explain what has happened to output. Over the last two years, real consumer spending has risen by 6 per cent, and retail sales have held steady; yet total output has fallen 3 per cent, and non-oil output 6 per cent. It is this divergence which remains to be explained by the financial forces operating on the whole economy.

The rise in sterling is, of course, the clue which explains much else. The improvement in the terms of trade—the inverse, unhappily, of our loss of price competitiveness — has raised real incomes, and provided the means of payment for a sharply increased volume of imports.

However, this is not the whole story. The current account was in quite strong surplus in 1978, despite the need to find £2bn to pay for net oil imports. For the last two months it has been in surplus again—this time with a small positive contribution from oil: if this were a reliable trend, one might conclude that we have simply used our oil to pay for greatly enhanced imports of other things.

Unfortunately the truth is probably worse than this. Imports have recently been depressed by the recession in home sales, and efforts to reduce stocks. Exports are probably above their trend level, as exporters work through their order books. It still seems likely that as official forecasts have suggested, the underlying balance of payments has deteriorated sharply, despite the oil bonus.

This underlying deterioration suggests how far mismanagement of the economy has intensified the troubles which industry was bound to suffer as the UK became a major oil-producer. For more than two years now, under Chancellors of both parties, the British stance has been to try to offset the monetary results of excessive public sector borrowing with high interest rates. The attempt has been unsuccessful, but the high interest rates have helped to buoy up sterling. Sterling fell sharply yesterday on talk of a possible cut in interest rates and of over-supply in the oil market. The pincer movement which is squeezing industry could hardly be more neatly summarised.

Strategy review

The Government must, of course, seek some clear evidence that the recession is reducing the pressures of money expansion before rates can be cut without undermining its surviving credibility. For the longer term, however, a far more comprehensive review of strategy is required. Consumers cannot be compelled to continue endlessly to supply the restraint in spending which the Government has failed to achieve; it is not they who are living beyond their means. Only Government action can produce reliably the circumstances in which interest rates can not only come down, but stay down.

Mr. Trudeau's dilemma

THE BREAKDOWN of Mr. Trudeau's constitutional conference with the 10 Canadian premiers was not a matter of legal quibbles: it was a fight for power and money. Almost without exception, the premiers were not ready to reverse a process which has lately increased their powers at the expense of the Federal Government.

That shift has been taking place because the British North America Act (BNA) of 1867 gives the provinces responsibility for their natural resources. Originally that meant timber, farming, and little else. Now it means the oil and gas which have made Alberta and British Columbia rich and—if hopes are fulfilled—will do the same for Newfoundland and Nova Scotia. It means the Atlantic fisheries and the hydro-electricity upon which Quebec bases its hopes of an economic flowering.

Ottawa has been struggling with Alberta since the early 1970s to keep down the price of oil, and for a greater share in the fiscal levies on oil companies. It did so for the money, but also to defend the interests of manufacturing industry, which means above all the non-oil provinces of Quebec and Ontario. Until this year compromises were always reached. But now Alberta is playing really rough with a threat to reduce output unless it gets the price it wants.

Veto

These arguments have become Trudeau's ambition to give Trudeau' s ambition to give Canada its own constitution—to "patriate" the British North America Act. He argues that it is an anachronism for Canada, sovereign since 1931, still to have to ask the UK Parliament if it wants to change the sensitive sections of the BNA. These include, above all, the distribution of powers between Ottawa and the provinces.

Though the matter has not been tested in any court, the usual constitutional doctrine in Canada has been that such changes may only be requested if the Federal and provincial Governments are unanimous. That, in practice, gives every province a veto which it is unlikely to surrender lightly.

For that reason it has never been possible to agree on a procedure for amending the Act once it has been "patriated." Several proposals have been made, all involving a degree of consensus going beyond a simple parliamentary majority in Ottawa. One formula, for instance, would have required changes to be submitted to popular referendum, with a majority required in each of four regions: the West, Ontario, Quebec and the East.

If Mr. Trudeau now makes good a threat, made indirectly and perhaps for tactical reasons, unilaterally to ask London for patriation he would be riding roughshod over provincial aspirations. He would also be putting Westminster into a most embarrassing situation. A statement made in the House of Lords on July 25, 1979, by Lord Trefgarne on behalf of the British Government suggested strongly that a request from Ottawa to patriate on the strength of a vote in the Canadian Parliament could not be refused. "We cannot be the arbiters of the correct balance of the case presented to us: this must be the sole responsibility of the Canadian Government," he said.

Militant

The more militant among the Canadian provinces are certain to challenge that view. Some are already cautiously lobbying for support at Westminster. An acrimonious debate at Westminster—even if it were kept largely behind the scenes—would be most embarrassing to all concerned, Mr. Trudeau included.

The Canadian Prime Minister has flirted with the idea of holding a referendum on unilateral patriation. He has the majority in Ottawa necessary to pass legislation for a referendum. Its outcome, if it were ever held, could be another matter. Of course a majority of Canadians, if asked, want their own constitution. But regional feelings are strong, and in a real fight the outcome would by no means be certain.

Mr. Trudeau has always striven for the one-ness of Canada against provincial pluralism, and the one-ness of the Canadian nation against the French-English division. He is strong willed and eager to make his mark on history. But he should be politician enough to know that precipitate action now could backfire.

ERA OF U.S. HEGEMONY MAY BE ENDING

Why the IMF fears the PLO challenge

Jurek Martin examines the implications of PLO attempts to achieve observer status at the International Monetary Fund


Status-seeker Yassir Arafat (left) of the PLO; his challenge poses a problem for the IMF's Jacques de Larosière

IF THERE is one word which has always sent a nervous shudder through the collective soul of the International Monetary Fund, it is "politics."

There is a certain self-conscious naïveté in this attitude because the IMF is an institution where political infighting is not unknown and whose purity and objectivity has occasionally been sullied by political considerations in the past. (Loans to Nicaragua, both during and after the Somoza régime, are just one recent example).

But never before has the IMF found itself so squarely, and so helplessly, in the middle of an international political power play as it does today over the question of whether or not the Palestinian Liberation Organisation (PLO) should be accorded observer status at this year's annual meeting. This will be held, jointly with the World Bank, in three weeks' time.

It is a subject light years removed from the esoteric realms of special drawing rights and conditionality in which the IMF customarily deals, yet it is one which could ultimately significantly alter the rules by which the IMF plays its game. As one executive director put it recently, having carefully run through the exhaustive arguments on all sides of the issue,

The old order under threat

"It's one of those damned-if-you-do, damned-if-you-don't situations."

At one level the whole PLO question may be seen as a significant new wrinkle in the Arab policy of forcing a political settlement in the Middle East against the resistance of an American administration naturally hamstrung by the imminence of a presidential election.

But the approach that Saudi Arabia and Kuwait have adopted towards the IMF (and the World Bank) has superimposed on the Middle East framework an altogether more fundamental confrontation between North and South for control over international economic policy.

For the first time the often casual—but still undeniable—hegemony that the U.S. has exercised over the major international financial institutions, designed to be both the conduits and policemen of resource transfers from the rich to the poor, is being seriously challenged: and for the first time it is by no means clear that the old order will triumph.

The potential stakes are, at least in the context of the two institutions, apocalyptic. That does not, however, mean that the apocalypse will take place in the grand ballroom of the Sheraton Park hotel here in Washington at the turn of this month. It still stretches the imagination to picture the normally staid and predictable Fund-Bank annual meeting transformed into a cross between a UN General Assembly and an American political convention, with the world's finance ministers lobbying and caucusing like fury.

But, given the sourness that currently prevails in economic relations between the developing and industrialised world, it is conceivable that the first shots in the war will be fired then and that, in retrospect, the 1980 annual meeting will come to be seen as a watershed in the evolution of the IMF itself, if not of the world.

It is necessary to take a fairly long look at the chain of events, however abstruse some of them may be, that have precipitated the current crisis.

A year ago, in Belgrade, it did not seem that serious. It was relatively easy then for the

Committee missed its opportunity

Western nations, under the direction of Mr. Robert Muldoon, New Zealand's Prime Minister and chairman of the last meeting, to finesse the tentative demand that the PLO be granted observer status by commissioning a further study. In any case, that annual meeting had other things on its mind—most notably the proposed creation of a dollar substitution account and the overheated state of the American economy and the international money markets, traditional IMF bread and butter subjects.

In hindsight, it is now apparent that 1979 was a missed opportunity. Mr. Muldoon's committee desultorily dragged on, never close to an agreement either on the PLO or on a more wide ranging review of who ought to get observer status. Meanwhile, Arab nations, impelled by the frustration of observing the Camp David peace process grind to an apparent standstill on the rocks of, as they saw it, Israeli intransigence, undertook a profitable study of the little-read by-laws of the IMF and World Bank. At the same time the chairmanship of the 1980 annual meeting passed on to Mr. Amin Jamal, the Tanzanian Finance Minister, a man much more receptive both to the PLO cause and to the need for the developing world to find better levers in its negotiations with the industrialised bloc. The solidarity of the Third World members was enhanced when the Group of Seventy Seven developing nations, meeting in Arusha earlier this year, unanimously endorsed recognition of the PLO.

Events subsequently have moved at a faster, more visible pace. In midsummer, Saudi Arabia and Kuwait pulled out of two fairly routine IMF and Bank funding operations, citing the PLO case and putting their money, as it were, where their mouths were. However, as the IMF's managing director, M. Jacques de Larosiere, established on a mission to the Middle East in August, they did not threaten to back out of their commitments to any major IMF recycling operation; nor did their action make life especially difficult for the IMF, which has ample liquidity and modest loan demand at present. But the warning was clear and it was reinforced last week in Riyadh, the Saudi capital by a communiqué following an Arab central bankers' meeting.

Sensing what was afoot, Mr. Sam Cross, the U.S. executive director, successfully proposed to the board that observers to this year's meeting be confined to those invited to Belgrade. This showed the U.S. was alive to the domestic political implications of the PLO issue. The board endorsed his motion,

Stand up and be counted

which was transmitted to the Bank's governors — the 140 finance ministers representing member governors — for ratification.

The U.S. also suggested that the IMF itself undertake a revision of the guidelines covering observers, to be completed by next March. There is general agreement that this needs updating, to take account of the status of, for example, Taiwan, now that the People's Republic has resumed the China seat. There would also be an opportunity at least to investigate the precedent set by the PLO question, insofar as it might effect other "governments-in-exile" (the Polisario, for instance).

But the catch was that the Arab and developing nations had unearthed a previously little noticed provision in the IMF's statutes requiring that a quorum of governors (half of the institution's member states, comprising two-thirds of its weighted vote) be obtained if a vote is to be validated. Simply *not replying* to the proposal could consign it to defeat and leave apparent discretion (though there is dispute on how far reaching it is) in the hands of the chairman of the annual meeting, Mr. Jamal. The ruse worked: the U.S. asked for an extension of the deadline and is now trying through diplomatic channels to raise a quorum. Opinions are divided on whether it will succeed by the new deadline this Friday.

All of which has combined to put the Carter Administration in a terrible bind. On the one hand, it would not help Mr. Carter's re-election to see the PLO handed a propaganda victory—in the U.S. capital city of all places—just five weeks before the nation votes. If it fails to raise a quorum this may happen, though the U.S. will probably try and insist that Mr. Jamal do nothing without the assent of the executive board, on which the U.S. still commands a majority.

Even if it wins on the quorum and carries the day, either Mr. Jamal, or somebody else, can easily raise the issue on the floor of the annual meeting, thus obliging the U.S. and a horde of other countries (who would rather stay discreetly silent) to stand up and be counted.

The U.S., the IMF and the World Bank could suffer if the PLO is admitted. The Administration is presently making a strong pitch to Congress for approval of two central items — ratification of the seventh general quota increase at the IMF and of the replenishment of the International Development Association, the soft loan arm of the World Bank. Last week Mr. G. William Miller, the Treasury Secretary, delivered a major speech in New York in support of both measures in terms which drew unqualified admiration from IMF and Bank officials.

If the Administration really wanted to play this game roughly, and for short term domestic political impact, an obvious sanction is for it to threaten to withhold support for both proposals, thus damaging the operating capabilities of both institutions. In fact, Congress is quite capable of taking matters into its own hands and refusing to increase U.S. financing for organisations which, it will be argued, curry favour with terrorist bodies like the PLO. The IDA replenishment, in particular, looks extremely vulnerable. If anything, it exacerbates the known distaste of the present Congress for foreign assistance.

But the Administration is constrained, as far as the IMF quota review is concerned, by a strange arithmetical possibility. This is that the quota increase could take effect without U.S. participation, producing a *de facto* diminution of American power within the IMF.

Implementing the quota requires the approval of 75 per cent of the IMF's weighted voting membership and the U.S. currently commands just under 20 per cent of the vote. At the last count, more than 50 per cent approval had been obtained, without the U.S. and without a number of large industrialised countries concurring. If the increase goes through without U.S. participation, America's influence in future votes would be correspondingly reduced to under 12 per cent and that of

It's blackmail, say IMF officials

the developing nations, as a bloc, would rise to about 45 per cent. Sooner or later, the argument runs, the economic policies with which the IMF has been indelibly associated would have to reflect this changed reality and the U.S. would, in effect, have cut off its own nose over the PLO in order to spite its face.

This is something that the Carter Administration, which has proved generally sympathetic to the cause of international economic development, does not want to countenance. Thus the sanctions it could bring to bear are themselves limited to the essentially cosmetic: if the PLO wins its case, Mr. Carter himself may forsake the traditional presidential appearance at the annual meeting.

A fuss may also be created over the visa status of those purporting to represent the PLO, though this is unlikely to prove effective. In the meanwhile, the IMF itself, not to mention the World Bank, can do little.

The Fund might take a more benevolent attitude towards the radical plan of action for international monetary reform drawn up by the Group of 24 developing nations than it has to date. But that is really only skirting the fringes of the issue. In any case, receptiveness to such reform proposals remains essentially the responsibility of national governments: the IMF would merely facilitate political decisions taken elsewhere.

Thus it is that senior IMF officials, accustomed to relative anonymity, are now speaking freely of the PLO issue being a "watershed" in the organisation's evolution, of "this regrettable state of affairs," of resentment against "political blackmail." There is hope, but no optimism, that moderate, accommodating voices will prevail. "Whichever side wins now, we haven't heard the end of it," an executive director said, glumly.

MEN AND MATTERS

Mr. Fowler takes a flier

British Rail, you may have heard, cancelled today's inaugural advanced passenger train trip to Glasgow because of a curious effect on travellers which is probably best described as *mal de chemin de fer*.

But Transport Minister Norman Fowler is made of stern stuff. He will step aboard at Euston this morning for what I am told is a "personal, private" run on the 150 mph express.

The Minister is understandably eager to educate himself about the train and discuss its potential and current difficulties with BR officials, since he has the somewhat ticklish task of approving a £150m investment programme for 60 of the things.

BR is also anxious to "devote all the time possible" to showing Fowler how the train performs. This morning, however, there will be little enough time for discussion aboard the APT. The run, originally planned to zoom up to Glasgow and back, will take him only as far as Crewe and return him to London in time for lunch on terra firma. Which, in the circumstances, may be just as well.

"A week may be a long time in politics but five hundred days is a short time in monetarism"

Going home

Declan Febily, the Irish Industrial Development Authority tells me, should serve as a good example to others of his kind. An engineer all his life, well-established in his corner of British industry, and by his own admission "not a finance man," he has been transformed in double-quick time into the head of a new £400,000 manufacturing venture in Ballyfermot, West Dublin.

Febily is the first expatriate to be hooked in the IDA's fishing expedition currently under way in the UK. Dangling 60 per cent grants on buildings and equipment, subsidised rents and interest rates, the authority is looking here and elsewhere for thriving entrepreneurs who may be tempted to go home and repeat their success.

Alluring as the bait is, however, promotions manager Ed McDonald tells me that one of the main difficulties is persuading people who are necessarily well-established to uproot themselves and their families.

"Pride and credibility are at issue as well," he says. "If it does not work out a man has to think how he can get back into his industry."

Febily, 46, with family ties loosening as his children grow up, was a partner in a Manchester company making fans and impellers when he made his first tentative approach a year ago. Ambitious to work alone, but daunted by the task of rounding up the necessary capital, he eyed the financial package worked out by the IDA.

In March, after 24 years in England, he succumbed to the new lure of the old country. He is already on stream with a total staff of 33, producing fans for the British market. Funded by Irish banks and paying interest at a comfortable 12 per cent, he aims for a modest target of £1m sales in his second year and a staff of up to 60.

And should anyone be tempted to protest at the "poaching" of talent from Britain, let them first consider how the IDA's enterprise has helped lighten our burdens. Febily already employs 10 people in his Manchester sales and service office, and, he points out, "we are using all British motors, British bearings and British steel."

Re-pressed

After years of writing for newspapers, former London journalist, Tom Kent, has been given the job of reporting on them. The Canadian Government has plucked him from his chair at Dalhousie University, Halifax, to head its Royal Commission inquiry into the growing concentration of newspaper ownership in the country.

Kent's position has a certain piquancy. He left Britain and the home editorship of the Economist in 1954 to edit the Winnipeg Free Press. When his contract expired five years later, it was not renewed.

One of his tasks will be to determine whether the Thomson-owned newspaper, now enjoying a monopoly of the news in the city, is fulfilling its proper role.

The Commission's pursuit of the Press owners is expected to start shortly, hard on the heels of the Federal investigators who have raided the Thomson offices, and those of the other main newspaper chain, Southam, in search of any evidence of conspiracy to reduce competition.

Kent, who served for a spell as adviser to the late Prime Minister, Lester Pearson, has been asked to file his report by July next year. It may finally decide whether the Trudeau Government gives the priority to tougher competition legislation which has been repeatedly promised for the past decade.

Once the deadline has been met, Kent intends to put away his notebook and return to filling those of the students in the administrative studies department which he heads at Dalhousie.

Nicola rules

David John Smith—you are Scotland's Mister Average. Or so claims James Travers, a statistician at Scotland's General Register Office, who has recently completed a computer-aided survey of name patterns north of the border. The Smiths have maintained their dominance at the top of the surname chart since 1858, with the doughty MacDonalds running them a close second in all surveys except, for some reason, 1935, when a birthquake among the Browns toppled them for a brief spell.

David toppled John as the top Scots forename in the mid-seventies, while in a far more exciting development on the distaff side, Nicola soared out of nowhere to top the chart, ousting the Margarets who had held sway for over a century.

Out of Travers' computer pops the news that lads were more likely than lasses to be gifted with a multiplicity of names—over a third of female bairns born in 1976 will have to struggle through life with only a single forename. But a signal victory for the women of Scotland is struck by the mother who endowed her daughter with no less than nine names—two ahead of the nearest boy. And those names, if she had observed the probabilities of Travers' chart, would have been Nicola Karen Claire Angela Fiona Susan Jenifer Julie Gillian. Ms N.K.C.A.F.S.J.J.G. Smith, the computer and I look forward to hearing from you.

Hidden quality

Estate agent to concerned client: "I know the garden's only 30 ft square, sir, but it goes as deep as any in the country."

Observer

FINANCIAL TIMES SURVEY

Tuesday September 16 1980

Although the industry is cyclical by tradition, there are fears that its current recession is serious. But engine builders in Europe and the U.S. have reacted to market conditions and may emerge in a stronger position to face competition from the Far East.

Diesels

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Manufacturers determined to fight back

By Hazel Duffy, Industrial Correspondent

A SHORT while ago, the diesel engine appeared to be on the verge of almost unlimited growth. The escalatinn in fuel prices promised suddenly to transform the workhorse of industry and transport, which had been regarded for years as a dirty and noisy necessity, into a more sought-after product.

Now is perhaps a good time to take stock of bow far the diesel has progressed since it appeared in this new light, and to make an assessment nf its future.

The immediate situation in the industry is far from encouraging. The worldwide economic recession has depressed demand for almost all of the end-products which are powered hy diesel: commercial vehicles, cars, industrial and agricultural equipment. The consequence has been a spate of redundancies, short-time working and prolonged holidays as the engine manufacturers attempt to bring supply more into line with demand.

Expansion

The industry is traditionally cyclical, reflecting the peaks and troughs of demand by the end-users. But the current recession may prove to be more serious, pointing to a mnre fundamental over-capacity as a result nf rapld expansinn hy many engine manufacturers in the last five years.

At the same time, the present imbalance could reflect the shift ln manufacturing strengths away from the U.S. and Europe towards the Far East. In construction equipment, certain industrial applications, and ships, for instance, Japanese penetration has grown considerably since the last recession. If this continues, it will have important implications for the manufacturers of all components, including diesel engines.

A possihle counter to this pattern, however, is the fact that companies have prohahly reacted more swiftly to market conditions than they did in the last recession, and may well emerge in a stronger cost-position from which to take on the competition from the Far East.

Certainly in Europe, which can be regarded as the bome of the diesel engine (European production ls around three times that of the U.S.), there are strong indications tbat the engine manufacturers are determined to fight hack.

But as with all components, the future of the diesel will depend to some extent on the marketing success of their customers, the original equipment manufacturers (OEMs). Some observers of the Britisb diesel engine industry—one of the strongest in Europe—bave expressed concern about its dependence on end-prodncts which sbow little prospect of significant growth.

Planning Research and Systems (PRS), a research organisation specialising in the diesel engine industry, estimates that diesel production in the UK has declined from 21 per cent of world production in 1972 to 10 per cent in 1979.

As a proportion of West European production, the UK has declined from 40 to 24 per cent over the same period—from about 810,000 units in 1972 to 790,000 in 1979, while West European production overall bas grown at a rate of 10 per cent a year from 2m to 3.3m in the period. A mark nf growing competition from other parts of the world, however, is the fact that West European production has declined from 52 to 44 per cent of world production.

PRS attributes the relative decline of the Britisb industry in part to the greater demand for car dieselisation on the Continent tban in the UK. Althongh there is still considerable scope in Europe fnr replacement of petrol engines by diesels in various applications — particularly in the industrial eqnipment area—most observers agree that the car represents the most important single growth area.

Most of the major European car producers — Volkswagen, Fiat, Peugeot, Renault, and others—offer a diesel version of some of their most popular cars The exception is Ford which although it offers a Peugeot diesel in the Granada, has not yet accepted that diesel-powered cars will be a popular choice. Ford is talking with certain engine manufacturers about going into diesels, perhaps on a joint hasis with the German company, Deutz. BL, bowever, appears to have made little progress yet in developing a car diesel. An important factor in determining the attraction of the diesel car, of course, is the price of diesel fuel. In Italy, Spain and Sweden, for example, diesel fuel costs less than half as much as petrol. In the UK, the price advantage of diesel is minimal.

Although there is no douht the diesel engined car has a permanent future, the degree of enthusiasm among the car-huying public may have been nver-estimated hy some forecasters. In the U.S., the Volkswagen Golf diesel has enjoyed considerable success, but in Europe, most drivers still view the diesel-car as too sluggish. Certainly the potential diesel convert will take into account the higher initial outlay for the diesel-engined car and weigh this against the fuel economies over a period of time.

It should also be noted that in the U.S., Ford pulled out of its exploratory studies for a car-diesel with Cummins, in favour of concentrating on its "Proco" engine. This is described as an advanced petrol engine which has some of the advantages of diesel.

In some more traditional applications, the diesel is losing against other forms of power-generation. For example, in rail-locomotives the trend is distioctly away from diesel towards electrification of tracks; in standby generating sets, fluidised hed comhustion is expected to hecome more important; and in military applications, the gas-turbine is winning orders from the diesel.

Aside from this contracting sector of the market, there are very real opportunities for diesel growtb in the U.S. Cars apart, the switch from petrol to diesel in medium-duty commercial vehicles over the past two to three years has been very significant. It bas been suggested that European knowledge of the diesel in truck applications is so much more advanced than in the U.S. (where traditionally diesel has heen limited to heavy-duty trucks) that the time is ripe for the European truck manufacturers to cross tha Atlantic. A *few companies plan to do this*, although it is unlikely that the American truck companies will allow them to make rapid advances.

Dominated

Other opportunities for tbe lower end of the 30-500 hp diesel range *undoubtedly* exist in the U.S., for use in small marine and industrial applications that are still dominated hy petrol. In the present state of the industry, *there is insufficient* capacity for manufactures in the U.S. to meet the expected demand. Hence the chance for the Europeans and Japanese, who have *much* more expertise at this end of the range, to expand into the U.S.

This might seem strange in the light of Perkins' decislon to close its U.S. factory a short while ago, hut this appeara to have had more to do with the facilities of the factory than the state of the market. Deutz has recently announced its intention to manufacture io the U.S. Eurofinance, the Paris-hased research organisation, proposes in a recent survey that the ideal solution would be for Perkins and Deutz to combine for the purpose of attacking the U.S. market.

Another area of expansion for the dlesel in Europe is expected to he the marine sector. Again, Eurofinance estimates that as a result of a comhination of factors, new diesel marine propnlsion requirements may bave risen by between 30 and 45 per cent in the mid 1980s against *the levels of two years ago.*

The basis of this projection is first, the recovery in shipbuilding: second, the contioued trend towards dieselisation in new vessels; and *third*, the diesel re-engining of existing vessels. If the projection proves correct, it will come as a long-awalted hoost to a part of the indnstry which is particularly strong in Europe.

The outlook for the diesel engine is more optimistic than for many sectors of engineering. *But the increasingly competitive forces* in hoth the production of engines and the user-products will ensure that diesel manufacturing in Europe will have to be suhject to extremely rigorous costings, if the Continent is to hold on to its dominant place in the market.

COMPETITORS OF THE DIESEL ENGINE

Characteristic	Petrol/Gas	Gas Turbine	Steam	Nuclear	Electric
Size	smaller	mnch smaller	larger	larger	smaller
Weight	lighter	mnch lighter	beavier	heavier	lighter
Noise	less	more	less	less	less
Initial Cost	lower	higher	higher	higher	lower
Fuel Consumption	higher	higher	bigher	not comp*	higher**
Reliability	lower	equivalent	bigher	not comp	equivalent

* At present the efficiency of the nuclear cycle is very low, with the advent of fast hreeder technology it will hecome much higher.

** The electric motor may reach efficiency levels of 80% or more by itself. The prohlem is that the generation and distrihntion of electricity is not a particnlarly efficient process. The total system efficiency of an elcetric motor is therefore qulte low.

Source: Eurofinance

Development along three routes

BEFORE THE introduction of environmental and energy conservation constraints, today's diesel engine had evolved by what the biologists call a natural selection process alnng three parallel paths, influenced by the combined effects of engine size and application. There are now three fairly distinct species in which the methods of mixing the fuel and air differ significantly.

The first nf these species is the larger slow and medium speed engines for marine, rail traction and stationary power. These rely primarily on the fuel being distributed throughout the combustion chamber by the fuel injector.

The second group comprises mainly direct injection engines to power trucks and smaller hoats. These engines mix the fnel and air through fuel distribution by the fuel injector, with a moderate degree of air turbulence generated in the engine cylinder during the induction process.

Finally, there is the rapidly expanding family of small high speed diesels employing compression swirl combustion systems in wbich the mixing is achieved mainly by a high degree of air turbulence generated within the combustion space. This group of engines is rapidly penetrating the light commercial vehicle and passenger car field in competition with the petrol engine.

Tbe lines dividing the three types are inevitably not very distinct. With the need to improve the engines to meet future requirements there will undoubtedly be some interbreeding, to carry the biological metapbor perhaps a little too far.

Although fuel economy is now the number one requirement in all diesel engine applications, nowhere is it more vital than in the larger, lower speed engines. Development continues in all areas likely to render the engines more fuel-efficient while still extending the power ratings. Better combustion is sought through improvements in mixing the fuel and the air as the air density in the cylinder is increased.

The need is for more sophisticated fuel injection equipment working at higber pressures. Similarly more efficient turbochargers are required to minimise energy losses inevitable wben converting exhaust gas energy into inlet air density. Other loss areas which are being investigated are engine friction and the use of compounding or bottoming cycles, whereby the maximum amount nf energy is extracted from the exhaust gases and fed back into the crankshaft.

The second major activity area concerns alternative fuels. Large stationary and in some cases marine diesels have long been used to operate on fuels as diverse as residual oil and natural gas, with suitable modifications either to process the fnel before use or assist ignition. These engines therefore, are prime candidates for attempts to run on still more diverse fuels without losing the diesel's basic fuel efficient characteristics.

Fuels as wide-ranging as alcobol from biomass, to coal and wood-dust are heing investigated as a means of overcoming oil shortages in some parts of the world. The "solid" fnels require generally longer burning times and so are best suited to slow-speed engines. However, the means for injecting the fuels in traditional diesel fashion is clearly a serious prnblem for the equipment manufacturer.

In all these activities the larger engines have to remain competitive in terms of reliability since "down time" is also very expensive. Overhauls are required after a minimum 10,000 bonrs of operation on inferior fuels. When operating on distillate fuels 20,000 bours is more normal.

Difficulties

In the more mobile diesel engine applications such as large commercial vehicles, it is accepted that operation on inferior fuels presents serious difficulties. Problems arise from the need for flexibility of operation, and from the logistics of ensuring a supply of the required fuel bundreds or thousands of miles from base.

Attempts are being made to operate diesel truck engines on methaool, using a pilot charge of diesel fuel as the ignition sources. However, it is clearly more logical to reserve the higher grade distillate fuels for automotive use. The aims of research and development here are to achieve and maintain the best fuel economy in the face of environmental constraints such as the control of noise, black smoke and the gaseous emissions of oxides of nitrogen and unburned hydrocarbnns.

The United States Environmental Protection Agency is currently leading in new legislation to control exhaust emissions from diesel as well as gasoline engines. However, all manufacturers wishing to compete in world markets sbould take nnte of these regulations which are nf course, spreading to other areas such as Japan and Europe.

Given that such measures have an adverse effect on power and fuel econnmy, the engine best able to cope with the situation is the one which performs best when uninhibited. In the *truck sized engines which* are increasingly being turbocharged to ensure a combination of maximum power and payload, research and development are concentrated on improving combustion performance.

Although in almost universal use, the combination of fuel injection and air swirl to obtain the best mixing process is still not fully understood. Advanced techniqnes such as high-speed flame photograpby and laser-based air velocity measuring equipment are being applied within the cylinders of running engines to study air motion and the mixing process. It is hoped these will improve techniques for the design and development of swirling direct injection systems.

Current trends are towards higher air swirl and fuel injection rates leading, again, towards the need for still more sopbisticated fuel injection equipment. The results of these investigations are assessed on the basis not only of increases *in power and efficiency but also* on the trade-off with reduced exhaust emissions.

It is likely that developments in the truck size direct injection engines will become equally applicable to the smaller light duty truck and passenger car diesel engines. Here the use of divided or indirect injection systems are currently almost universal. The ability of *these systems to give high* power and to operate over a wide speed range bas been enjoyed at the expense of an inferior fuel economy compared with truck-type direct injection systems. However, they still afford a 25 per cent to 30 per cent improvement in miles per gallon compared with petrol engines.

In the search for still better econnmy, research is seeking ways to apply direct or open chamber technology to the small high speed diesel. The prohlems of smoke-limited performance, noise and gaseous emissions are increased as attempts are made to extend the operating speed range to equal that of the divided cbamber engines and so be acceptable as a passenger car or light duty engine.

Improvements sought

Improvements are still being sougbt in divided chamber engines as it is by no means certain that the high-speed direct injection engine will make the grade without unacceptably sophisticated fuel injection equipment. The trend towards *miniaturisation* of fuel injectors for these engines is permitting improvements in engine design and in some aspects of performance.

Tbe development of very small exhaust turbochargers offers the possibility of higher performance without sacrifice of fuel economy. Alternatively, it is possible to reduce the engine size for the same power with a beneficial effect on vehicle fuel economy.

The introdnction of regulations governing particulate emissions from light-duty diesel engines in the U.S. to maintain *air quality* standards as diesel engines become more popular in American automobiles, bas brought a new dimension to diesel engine development. As ideas for the reduction of particulate matter such as carbon and heavy hydrocarbons within the engine become exhausted, the industry is studying the possibilities of after-treatment using filters, with or without noble metal catalysts, in the exhaust system.

Progress is being made but the required combination of a high particulate extraction rate and long life has yet to be realised.

The possibility of health hazards associated with diesel exhaust constituents is not being ignored. There is no evidence so far to connect diesel fumes with lung cancer or *other respiratory diseases.* But since some of the exhaust constituents react positively as mutagens when tested on certain strains of bacteria, the industry is being encouraged by the U.S. Environmental Protection Agency to monitor the effects of developments on the level of mutagenic response, using the Ames test.

Noise from diesel engines, althongh unlikely to present serious health problems, is nevertheless recognised as one of the less acceptable characteristics. Noise reduction, both within the engine and by external treatment by cladding or enclosure, is proceeding. More sophisticated techniqnes employing bolography and computer graphics are being used to study the effects of structural design on noise radiation from the engine-surface.

The control of diesel combustion knock without sacrifice of performance is still elusive. Like exhaust emissions, the problem awaits more versa*tility in fuel injection* equipment.

The high level nf effort being applied to research and development of diesel engines is therefore fully justified, and is being maintained in spite of the current depressed state of the internal combustioh engine industry.

W. Murray Scott

Mr. Scott, nf Ricardo Consulting Engineers, is head nf the department concerned primarily with the development of automotive diesel engines.

A Detroit Diesel Allison employee attaches an exhaust manifold to an 8.2-litre Fuel Pincher engine at the company's Michigan plant. The engine will power a medium-sized truck

PRODUCTION OF DIESEL ENGINES
(MAJOR CENTRES)

Horse power	1972 0—50 '000s	1972 0—50 per cent	1972 51—500 '000s	1972 51—500 per cent	1979 0—50 '000s	1979 0—50 per cent	1979 51—500 000's	1979 51—500 per cent
United Kingdom	262	29	549	24	224	11	569	15
Other Western Europe	339	37	896	39	916	45	1,567	41
U.S.	21	2	418	18	22	1	849	22
Japan	292	32	429	19	875	43	865	22
TOTAL	914	100	2,292	100	2,037	100	3,850	100

Source: Planning Research Systems

Opposite ends of the industry share little in common

THE DIESEL ENGINE industry is a complex sector of engineering, covering a very wide range of engine size and power used in a wide range of applications. There is little *in common, for instance,* between a small diesel used to power a cultivator and the buge engines which drive ocean-going vessels.

However, by breaking down the type of engine into its horsepower category and referring to its applications, it is possible to identify certain trends in the industry. It is also worth noting that the diesel engine is an important component in any of its applications, and is frequently the single most expensive item in the final piece of equipment.

The original equipment manufacturers (OEMs) who have the greatest demand for diesel engines are in the automotive sector — trucks, buses, cars. These OEMs tend to make their own engines, and in fact all the big commercial vebicle manufacturers bave their own engine plants. But they also huy engines from other makers and so offer their customers not only the truck hut also the engine to suit their requirements.

In North America, truck operators normally specify the make of engine they want. This practice is also common in the UK, but less so on the Continent. Another factor is that the automotive-type engine can be easily adapted for other applications, which means that automotive manufacturers are frequently important suppliers of engines to, for instance, the industrial sector. Such competition is particularly irksome to the independent engine makers in present economic conditions, when the truck market is depressed and manufacturers are anxions to off-load some of their surplus engine production.

Japan leads

The smallest engine category —0-30 hp—falls outside the automotive application. This type of engine is most freqneotly used in small agricultural and industrial equipment, small generators, pumps, and so on. Japan is the largest supplier of these engines, largely because small agricultural equipment is needed for farmiog conditions io the Far East.

Yanmar is the largest producer in the world, with an output of over 300,000 units annually, followed by Kubota, with around 250,000. India is also a significant producer, with production of around 400,000. Kirloskar is India's biggest manufacturer. The Philippines and Indonesia are also emerging as significant diesel producers, largely as a result of licensing deals, while South America must also be reckoned with.

In Europe, the dominant producers are Italy (which also has special agricultural requirements), the UK, where Petters and Lister (both subsidiaries of Hawker Siddeley) have a strong repntation, and Germany.

The medium diesel category—30-500 bp — is the area of largest production. Europe, particularly Germany and the UK, and Japan are major contributors to world production in this category. Higher up the horsepower range — 150 hp and above—the U.S. begins to make its mark. Below this level, North America bas traditionally relied on cbeaper petrol engines for many applications that are dieselised in other parts of the world. But the rising fuel costs have put the more fuel-efficient diesel in a new light. Detroit Diesel Allison (part of General Motors), which claims it is the leading builder of beavy-duty diesels in the U.S., introduced earlier this year an 8.2 litre engine designed as an alternative to *gasoline* engines for medium-duty trucks.

Tbe three major independent engine makers in the 30-500 hp category are Cummins, Perkins (owned by Massey-Fergnson) and Deutz (a subsidiary of Kloeckner - Humboldt - Deutz). Cummins, based in the U.S., produces around 150,000 engines a year. European production is concentrated on three plants in the UK, and the company bas licensing agreements and joint ventures in Brazil, Mexico, India and Japan.

Cummins' strength is in the heavy duty diesel truck engine, but it is expanding its range downwards with a new 10-litre engine, primarily for trucks. It also plans to enter the lower horsepower range through an agreement with J. I. Case.

Perkins makes over 200,000 engines a year at its plant in Peterborongh, England, and around 150,000 knockdown kits for export. These are assembled around the world by Perkins' associated and subsidiary companies and by licensees. The Perkins range is 50-300 hp, and it offers a very large number of engine types. It is primarily a supplier of engines for tractors (around 40 per cent of output goes to its parent company), but Perkins still regards itself as an independent engine maker) and commercial vehicles. It also claims to supply engines for one-third of all the diesel-engine fork lift trucks around the world.

Deutz, based in Germany, considers itself independent since the sale of its interest in Iveco to Fiat. Deutz is the leading producer of air-cooled engines, producing aronnd 160,000 a year. It is particularly strong in industrial applications—25 per cent of its output is used in construction, machinery, 22 per cent in agricultural machinery, 19 per cent in commercial vehicles, 12 per cent in compressors, and 9 per cent in generating sets.

Nearly two years ago, Deutz hought the American Motors Corporation factory in Richmond, Indiana, where it intends to produce a line of air-cooled industrial and light truck engines. The plan is to produce over 40,000 air-cooled diesels annually, but the delay in agreement with Fiat abont compensation for the Iveco transfer could jeopardise the U.S. programme.

The UK is an important contributor to world diesel production. In addition to Cummins and Ford (hoth multi-nationals with British plants producing for international markets), and British Leyland, it has several independent manufacturers with worldwide reputations. In the Hawker-Siddeley gronp there is Gardner, which is strong in the truck and bus field; Rolls-Royce (part of Rolls-Royce Motors which has merged recently with Vickers), also in the truck area, but also supplying larger engines for defence equipment and generating sets; the GEC group of engine-makers, of which Dorman comes closest to volume production supplying the industrial, marine and power generation markets; also part of GEC are Paxman, specialising in rail traction, Ruston and Kelvin. Baudouin in France and Alco in the U.S. are also part of GEC.

Elsewhere in Europe, the *truck and car manufacturers*— Daimler-Benz, Volkswagen, MAN, in Germany; Peugeot/Citroen and Renault in France; Volvo and Saab-Scania in Sweden and Daf in Holland; are all major suppliers of engines, both for their own requirements and to a varying extent as suppliers of "loose" engines to automotive and industrial OEMs.

In the U.S., General Motors through Detroit Diesel, International Harvester, and Mack, are all truck manufacturers with big engine making facilities. Caterpillar and Cummins are also big suppliers of truck engines.

Two categories

In Japan, the engine makers include Isuzu, Mitsubishi, Toyota, Hino, Nissan, Toyo Kogyo, Daihatsu, Komatsu, IHI, and Yanmar, all in the medium-sized engine category supplying industrial, automotive, power generation and marine markets.

Engines of 500 hp and above are frequently broken into two categories—500-5,000 used for marine, traction, power generation and other industrial uses; and those over 5,000 bp (made in small numbers), which are used in ships and power generation. Europe is important as a supplier of engines in these larger categories, and much of the technology in the slow-speed marine diesel has been licensed by the leading European companies: Pielstick, Sulzer, MAN Burmeister and Wain (the Danish subsidiary of MAN) around the world. Much of the technology of the engines in Japanese ships, for instance, remains European. In the medium-large category (say up to 1,500 hp), the biggest manufacturers are MTU (Germany) and Cummins. European production of this engine size is estimated at around 8,000, their final markets split about equally between marine, traction (rail, construction equipment and military) and power generation.

This sector of the industry suffers from over-capacity. The future of the defence equipment market, for instance, is uncertain since the U.S. decided to go for gas turbines in new tank designs. Rolls-Royce, however, which was in the unenviable situation of having increased capacity to fulfil the Iranian tank orders, later cancelled, was relieved recently to get a big order for diesel-engined tanks from the British Government.

Other companies in this engine-size range, such as Mirrlees Blackstone (part of Hawker Siddeley), Brons and SACM, make heavy medium and high speed units exclusively for ships and power generation.

In the super engine category, the advance of electrification in rail systems has led to a decline in demand for rail traction engines in Europe. There is still scope for exports, however, particularly to the developing world.

Power generation absorbs about 50 per cent of medium-speed units, rail 15 per cent, and marine 35 per cent. Slow-speed two-stroke diesels now dominate in ocean-going vessels, baving almost taken over from steam turbines. The leading European producers in 1978 were Sulzer, B&W, MAN, Doxford and G.M.T. Doxford (part of British Shipbuilders), bas since closed.

Hazel Duffy

FACT- Diesel car market up 20% over 1979.

FACT- Peugeot market leader with 34% of all Diesel car Sales.

The number of diesel powered cars sold so far this year has greatly increased over the same period in 1979. At long last, diesels appear to have become accepted in Britain, the country whose engineering industry has contributed greatly to its technical development. Peugeot has a long standing relationship with companies such as Lucas CAV who design and manufacture diesel injection systems and Garrett Airesearch who make turbo-chargers, both of whom have experience that's second to none in their fields.

But why has this change taken place? Inevitably when personal finances are stretched, people look to economise, and one way of doing so with motoring is obviously to run a more economical car.

A diesel car will give you a much improved fuel consumption (averaging between 15%-20%), greater engine life expectancy, lower running costs and reliable starting at any temperature.

If you already buy diesel fuel in bulk for your commercial fleet, the savings will be even more apparent.

But why are Peugeot leading the field?

Firstly, because we have the widest Diesel range available in this country – eight very different models and each one purpose engineered from the initial design to take diesel power.

The 305 GRD, a 1550cc four door saloon, is one of the smallest yet most economical diesels available, returning up to 53 mpg.

The rugged, yet supremely comfortable 504 Saloon makes an ideal and proven workhorse.

The stylish 2 litre 505, voted 'Executive Car of the Year' by What Car? magazine, is also available with diesel in two trim levels.

The latest to join our diesel line up, the luxurious 604 D-turbo, the only turbo-charged diesel available in Britain, offers you the fuel economy of a Mini, up to 46 mpg, with the comfort of a limousine.

The Peugeot Estates, renowned as strong capacious load movers. We currently offer the 504 Estate and Family Estate (with three rows of forward facing seats) with diesel power. And soon to be introduced is the stylish, yet extremely practical 305 Diesel Estate.

We have a range of diesel light commercial vehicles too.

The newly introduced 504 Pick-up is available with a 1948cc diesel engine and the 305 Van will soon be launched with a 1550cc diesel unit.

The other reason why Peugeot are ahead is because we aren't new to Diesel. We are, in fact, one of the most experienced diesel manufacturers in the world having begun with diesel in 1928 and having now built well over a million engines. Our network of dealers are amongst the most experienced too, capable, therefore, of offering you an expert after sales service.

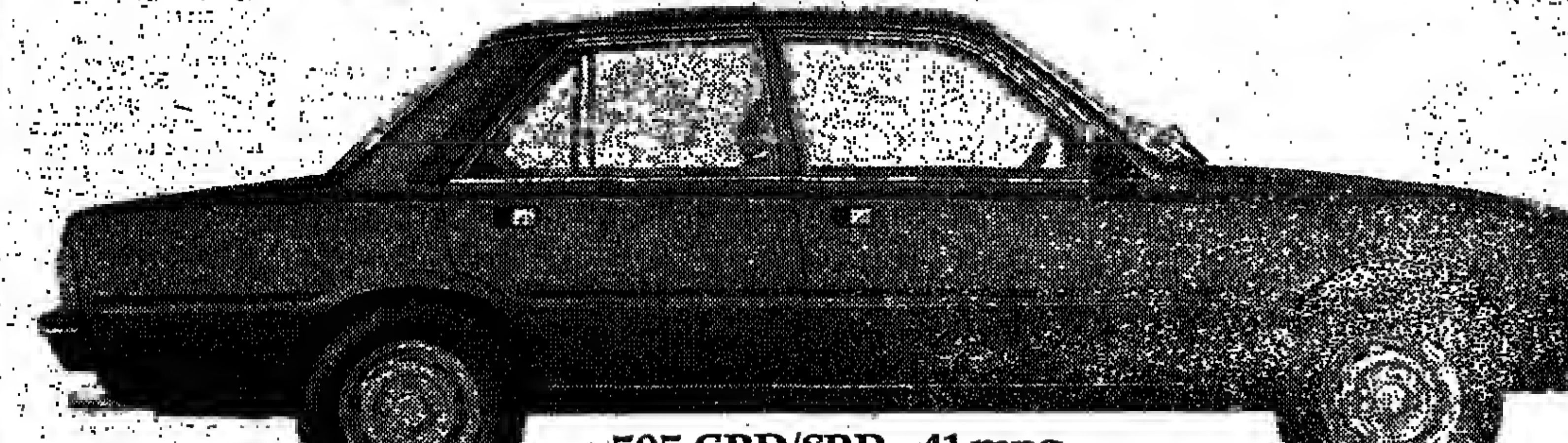
Should you take your Peugeot Diesel to the Continent – where diesel often costs considerably less than petrol – there are some 7,000 Peugeot dealers ready to assist you.

More and more people are looking to diesel as their way to economise and, a number of companies are switching their car fleets to diesels.

You can rely on Peugeot because when you buy one of our diesel cars you benefit from the wealth of Peugeot experience. And the result is a car that performs reliably, comfortably, safely and above all, economically.

305 GRD – 53 mpg

504 GRD – 41 mpg



505 GRD/SRD – 41 mpg

604 D-turbo – 46 mpg

504 D – 36 mpg 504 Family D – 38 mpg

PEUGEOT

World famous for strength.

Peugeot Automobiles UK Ltd.,
333 Western Avenue, London W3 0RS
Tel: 01-992 5366

Source of market figures: Jan.–July 1979/80 SMMT. Diesel fuel consumption at a constant 56 mph in accordance with French Government testing procedures.

Output adjusted to falling demand

INTERNATIONAL TRADE in diesel engines has become increasingly depressed in the past year, because of recession in the industrial countries and the impact of higher oil prices on the developing world, a major market for the smaller range of engines.

The large diesel engine manufacturers in Europe, Japan and to a lesser extent the United States, have had to adjust output and invesiment accordingly. Competition in some sectors has become fierce, particularly in the range of engines up to 30 hp used for agricultural equipment and industrial purposes.

World-wide growth in this sector has been in the region of 7 per cent a year until recently, when it fell to around 3 per cent. Future sales are not expected to increase by more than 5 per cent a year in the foreseeable future.

The total world market for these engines is now around 1.7m a year, for which companies such as Lister and Petter in the UK, Lombardini in Italy, Hatz, Farymann and Deutz of Germany, and Yanmar and Kubota of Japan are competing.

Slower growth in demand has meant some overcapacity in the industry, although this should be taken up before too long. But a notable downturn in the Japanese market for mini-tractors and cultivators has led to far more Japanese engine sales in the international market and consequent pressure on prices.

India has also made considerable inroads, with Kirkloskar selling around 100,000 units a year. Other small Indian companies have produced a similar amount, though mainly for their domestic market.

Although demand for 30 hp engines is universal in the developing countries, a high proportion of purchases are now tied to aid programmes. British companies now face additional problems because of the UK inflation rate and the high value of sterling. Since most of this business is on short term credit, they cannot take advantage of credit support through the Exports Credit Guarantee Department. Their major competitor in many countries is Hatz, which is able to take advantage of an inflation rate of around half that in Britain.

Early hopes of a substantial increase in the U.S. market for small diesel engines have so far proved groundless. This is largely the result of the continued predominance of petrol engines, mainly manufactured by Briggs and Stratton, fitted to small industrial equipment and in other applications such as *small tractors*.

Longer life

The relatively low price of fuel in the U.S. has also discouraged a switch to diesel engines, although Hawker-Siddeley's share in Onan Corporation of the U.S. and the licensing of Petter technology has led to some success in the U.S. markets where longer engine life is important.

Significantly, Briggs and Stratton has recently taken over Farymann of Germany, which was in some difficulty, giving rise to speculation that it may manufacture its diesel engines in the U.S. when growth areas of the market become more evident.

In the developing world thera are also slight shifts in market emphasis following the increasing success of some solar power systems. But there is no evident alternative to the diesel engine for most uses. In the small fishing industry, there are signs of moves away from outboard petrol angines towards small diesels.

The response of Lister and Petter, both owned by Hawker Siddeley, to the tough conditions abroad and in the UK, has been to improve productivity where possible while maintaining a high lavel of output.

But there are fears that Japanese competition in Europe will intensify. A significant pointer is the recent loss of a major North African order by West Germany to one of the Japanese manufacturers.

The Japanese companies have tended to concentrate their main efforts in the U.S. market, relying heavily on their lower prices to gain a foothold. Now the highly price-sensitive European market for construction equipment engines is regarded as a prime target.

In the range of engines from 35 hp to 255 hp, Perkins, owned by Massey-Ferguson of Canada, holds a dominant position in most parts of the world. The company produces around 550,000 units a year, of which 200,000 a year are made in Britain, 86 per cent of this output is exported directly or indirectly, and the company has plants in 15 other countries. Because a high proportion of its engines are designed for tractors and other farm equipment, it has suffered severely from the fall in demand in this sector, particularly in Europe and the United States.

Disturbing competition for Perkins is also coming from the Far East, notably Isuzu of Japan. The latter has previously produced engines mainly for use in its own equipment, but with domestic demand falling, it is estimated that around 65 per cent of its engines are now being sold at competitive prices on the open market.

The world market for medium-sized diesel engines designed for power generating sets, compressors, welding equipment and similar industrial uses has also declined recently, in line with slower growth in the industrialised countries. There have been sharper falls in demand, however, in some important markets, notably Iran, Iraq and Nigeria, although the position here has recently improved.

Britain's share of the world diesel engine market is very substantial, with around 14 par cent of engines used to power commercial vehicles and passenger cars, 27 per cent of those used in farm tractors, and 17 per cent of engines for construction equipment, industrial and marine use.

Much of the industry's strength lies in the high volume output of engines in the mid-power range. Despite flagging demand, Lister is going ahead with a major investment programme to increase capacity and strengthen its position in world markets when, it believes, demand returns to more normal levels.

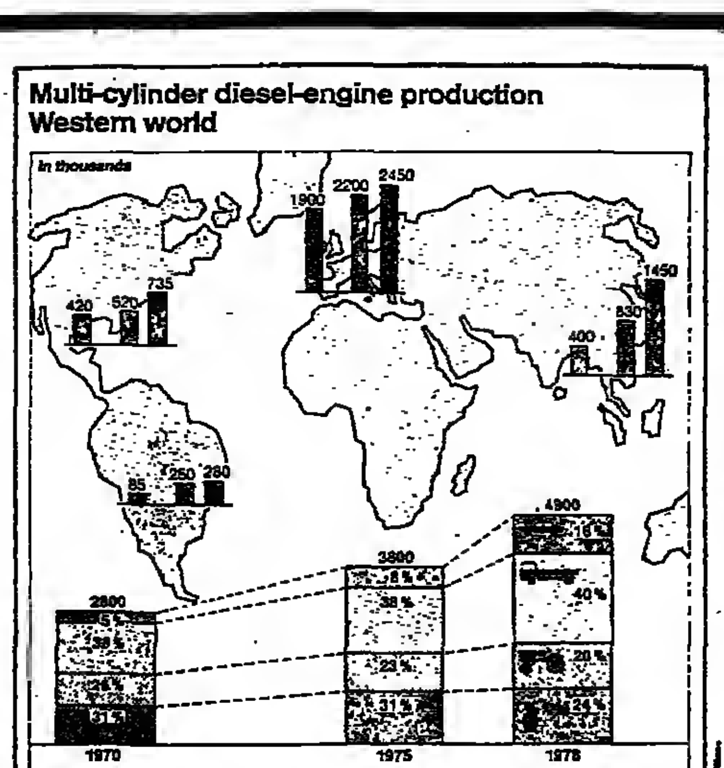
However, the need for a strong home market is regarded as essential for most successful exporting industries. The severe problems confronting the British tractor industry, and of commercial vehicle manufacturers in general, must be of some concern in the long term.

At the heavier end of the industry, Middle East markets for large diesel power generation sets remain fairly buoyant. GEC of Britain and General Electric of the U.S., Stork-Werkspoor of Holland, and Sulzer of Switzerland, are some of the most active companies in this area. In rail traction, General Electric retains a dominant position worldwide.

Companies such as Lister and Perkins ara extremely well placed to continue their pattern of growth, based mainly on exports. There is also a danger that unless unit costs are kept down by a reduction in inflation, countries in the Far East will slowly erode their commanding position.

Lorne Barling

Multi-cylinder diesel-engine production Western world



Source: BOSCH

U.S. offers scope for industrial engines

THE INDUSTRIAL and construction equipment sector is more diverse than the agricultural sector, and in most respects is more dependent on economic conditions for its growth. An additional factor, however, is that there is still scope for growth in diesel-engined applications in this sector in the U.S., although in Europe it is heavily dieselised.

Equipment used in construction projects varies enormously according to the scala of tha project, and therefore the requirement for diesel type and horsepower will also cover a wide range.

As with agricultural tractors, many of the large multi-national manufacturers of construction equipment also make their own engines. Caterpillar and Komatsu are the two largest examples, but International Harvester, John Deere, Ford, Fiat, General Motors, J. I. Case, and many more are all involved in the manufacture of construction equipment as well as their prime interests in their respective sectors. This overlap in equipment is carried over into the end uses — construction equipment, for instance, is used also in open-cast mining.

It is impossible therefore to be too rigid about the prospects for the construction equipment sector except in the most general terms. In Europe, public sector and industrial investment accounts for over half of construction activity. The sector has been generally depressed in reentc years, particularly in the public construction area as a result of squeezes on Government spending. Housebuilding activity has also been depressed in most parts of Europe.

The effects of this recession in construction, which came about long before the general economic recession, have been severe for most of the construction equipment manufacturers and hava consequently had thair effect on tha diesel sector. Some of the larger companies have survived only as a result of their being part of a group which has other interests and there have been a number of closures, sales (Ford, for instance, has withdrawn from some of its construction equipment activities in Europe, as has Massey-Ferguson), and mergers.

Tha multi-nationals apart, Europe has many independent manufacturere of such equipment which are important customers for the diesel engine makers. In the UK, for instance, companies like J. C. Bamford, Coles Cranes, and in Germany, Liebherr, O and K, and numerous othar companies, buy their engines from Perkins, Deutz, Cummins, Leyland, etc. Many companies offer their customers a choice of engine to suit their particular requirements.

Overcapacity

But tha fact that there is substantial overcapacity among the engine manufacturers means that competition to secure new outlets in this highly price-sensitive sector is intense. At the sama time, manufacturers lika Caterpillar, which have invested heavily in engina capacity to enter the third party market, have added to the competition when their own requirements have lessened as a result of the recession.

There is every sign that the battle will continue among the big angine manufacturers, but it would not come as a surprisa if some of the smaller companies — Leyland, for example — were forced to stop making engines for outside customers.

Prospects for equipment used in mining applications are brighter, particularly as regards coal, which is destined to becoma an increasingly competitive energy source. Construction equipment which is used frequently in mining operations include wheeled loaders, off-highway haulers to carry the overburden and the material being mined, and front-loading shovels.

Other industrial applications of the diesel include pumps, compressors, and welding sets, where demand patterns are linked closely to the rate of investment in industrial plant and equipment.

The sector prospects for expansion in the medium term are not encouraging.

Mechanical handling equipment has tended to hold up better, although there are signs that the industry in Europe and the U.S. is increasingly coming under pressure from Japanese products.

The sector is particularly important for Perkins, which claims to supply engines for one third of all diesel-engined industrial trucks, as well as the other independent engine makers. As with construction equipment, the manufacturers of lift trucks frequently offer a choice of engina to their customers.

Common standards of noise levels and emissions are being sought by tha lift truck manufacturers to comply with legislation which will be applied during tha coming decade by all governments.

Much of this responsibility falls upon the engine makers to come up with an engine which will meet thesa requirements. Particular attention has been paid to the problem at Perkins and Deutz, both substantial suppliers to this industry sector.

H.D.

Research presses ahead at all levels

THE NAME Diesel is, today, used to describe a large range of internal combustion engines, resembling Rudolph Diesel's original invention only in its cycles of operation and in tha high temperature of the compressed air used to ignite the fuel. For this reason the word diesel, no longer written with a capital letter, is used as a simpler alternative to "liquid fuel injection compression ignition engine."

To the operator, the term diesel engine means the ultimate in the efficient conversion of liquid hydrocarbon fuel into mechanical energy. To the man in the street, it conjures up an image of noise, smoke and smell, rather than a means of economic transportation that brings improved standards of living.

Efficient

The steadily increasing cost of oil in recent years, coupled with the demand to preserve and improve the quality of the environment, has added significantly to demand for more efficient and more socially acceptable diesel engines. The diesel engine is unlikely to be the best solution once the world's oil reserves heve run out or become too expensive to exploit. But within present technology, it can be relied upon to operate efficiently in the still widening spheres of application.

The diesel engine is currently achieving fuel savings right down to the smallest passenger cars with engines of 1.5 litres capacity or less. Even smaller engines are being considered to replace gasoline engines in 2-3 wheeled vehicles such as lawnmowers and stationary power plants.

Considerable effort is being expended, at all levels of research and development towards further improvement of the diesel engine, alongside the search for more advanced and diverse power plants as the gas turbine, stirling cycle, lean burn gasoline and stratified charge engines. It must, however, be pointed out that of all the alternatives, the diesel engine is probably the most sensitive to the quality of the fuel it uses. When this quality falls below a certain level there will be little justification for the existence of the diesel in its present form.

The diesel engine owes its efficiency to its ability to operate at high compression ratios and over a wide range of air/fuel ratios. Since the fuel is not introduced into the engine cylinder until just before ignition is required, there is no problem of pre-ignition. Indeed, it relies on auto ignition of tha fuel as it is injected into the hot compressed air in the cylinder to start combustion.

Mixing of the fuel and air takes place within tha cylinder from droplets of fuel generated by the fuel injector nozzle. Evaporation from the droplets ensures that there is always a wide range of mixture strengths, which ensures ignition somewhere within the mixture. It is therefore not necessary to throttle the engine to control mixture strength.

The lack of pumping losses is the second major reason for the good fuel economy of the diesel engine. Mixing and ignition takes place in a few milliseconds, so the ignition quality of the fuel and the mixing process are both very important.

Straightforward

Diesel fuel is extracted from cruda oil by a straightforward distillation process, comprising the fraction boiled off between 180 degrees C and 380 degrees C. The lighter components go to form chemical feed stocks, gasoline for passenger cars and kerosene for gas turbines in aircraft. The heavier components ara burned in boilers and halp surface roads.

The diesel fraction, like kerosene, has a high natural ignition quality. This is termad Cetane number and means it will ignite spontaneously in hot air around 400-500 degrees C, with a predictable time delay after being injected. The timing of fuel ignition for best performance is therefore as critical as the spark-timing in a gasoline engina. Tha performance as well as cold starting is also affected by tha ignition quality.

Diesel fual contains about 11 per cent more energy per gallon than gasoline. This accounts for nearly half the mileage improvement of diesel against gasoline-powered vehicles. Diesel fuel could therefore be compared to "real beer" emong internal combustion engine fuels.

The other factor determining the success of the diesel engine is its ability to mix fuel and air effectively within tha engine cylinder. Although the engine power output is controlled by the amount of fuel injected, the maximum power that an engina can produce is not determined by how much fuel can be injected but how much air can be made available and mixad with tha fuel. The mixing is achieved by distribution from the fuel injector by air turbulence, or, more commonly, by a combination of the two.

During the first 100 years of diesel engine development, the thermal efficiency of some of the larger engines has approached 40 per cent. In tha smaller engines air utilisation has reachad 80-85 per cent with an acceptable level of black smoke in the exhaust. Black smoke indicates that the engine is running out of available air for combustion, making it pointless to inject any more fuel. The smoke limit is reached at less than 100 per cent air utilisation, so tha diesel engina cannot equal the gasoline engine in power produced per litre of swept volume.

As the diesel has reached such a good level of economy we may ask in what areas further development can usefully take place. The primary concern has been to make this very efficient power unit still more efficient as well as more acceptable in its widening applications both from the viewpoint of the user and those sharing the environment.

The possibility of weaning tha diesel away from oil based fuels is also of considerable interest provided its fuel economy can be maintained.

Smoke and smell

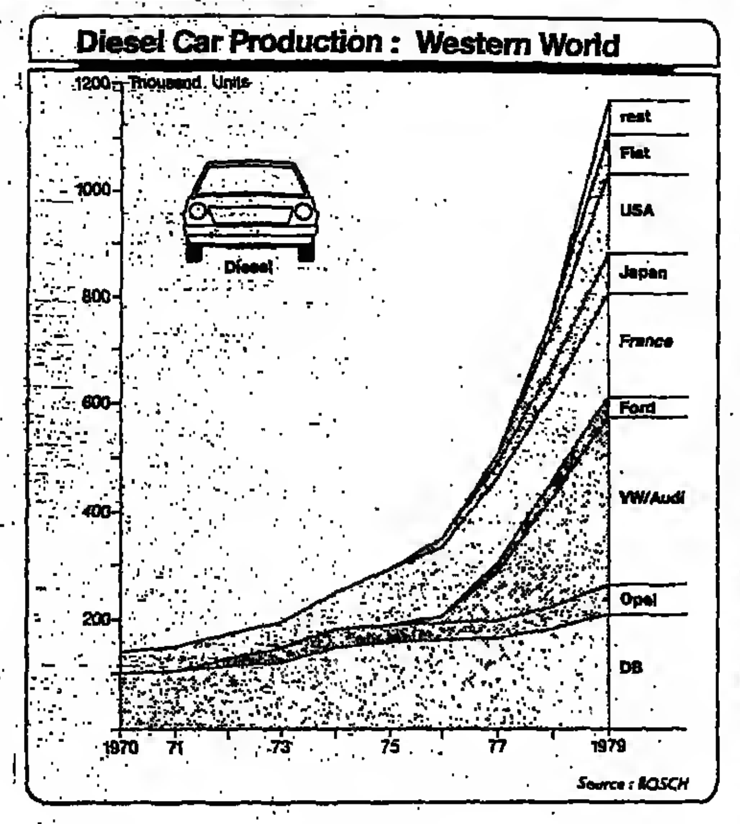
The word diesel has become synonymous with noise, smoke and smell, and not without reason. Man became conscious of the need to protect his environment rather earlier than he became aware of tha need to conserve oil. Lawe were formulated — particularly in the U.S. — to limit the amount of noise, smoke and odorous components (incompletely burned fuel) which can legally be emitted.

In general, measures to control thesa undesirable characteristics have resulted in less efficient operation of all types of internal combustion engines. The need to maximise efficiency while conforming to environmental regulations, and to render tha diesel less fastidious whila extending its field of application, has therefore continued to stimulate research and development at a high level.

W. Murray Scott

Strong underlying demand for trucks

A Cummins 14-litre NHC 250 engine powers ERF's 30-ton gross tipper while (below) Ford's medium-duty truck for the U.S. market can be fitted with a Detroit Diesel Allison 8.2-litre motor



MORE THAN 40 per cent of the diesel engines built go to power commercial vehicles. Last year around 2.5m diesel-engined commercials took the roads throughout the world, or roughly 20 per cent of the 10.42m produced. As for the Western countries, sales of diesel - engined commercial vehicles have been forecast to rise by 9 per cent a year to a total of 3.4m by 1985.

The forecasters are wavering somewhat at present because of the severity of the recession and the uncertainties about truck sales. In the U.S., for example, the consensus in the industry is that sales of medium and heavy trucks will fall by at least 25 per cent this year, from 378,000 to around 285,000.

So it may be that the forecast 3.4m total is not reached until a couple of years after 1985. But the underlying demand is undoubtedly there and will show itself once the West starts moving goods again at anything like normal rates.

At the heavy end of the commercial vehicle business throughout the world, diesel engines are almost universally used because fuel represents such a great part of total costs and because heavy trucks cover so many miles in a year.

But the steep rise in the price of oil in the mid-1970s spurred the diesel engine makers to seek improvements in the performance of their products, which have not changed very much for the past 25 years.

One of the major U.S. truck component suppliers, Eaton Corporation, has done some very thorough market research on this subject. It came to the conclusion that by 1990, a whole new range of heavy truck diesel engines will have been launched on to the world markets by various manufacturers. The engines will be smaller, lighter and use fuel more efficiently.

In Continental Europe, truck-makers tend to manufacture their own diesel engines. The theory is that overall performance is better if the whole drive-line (engine, transmission, drive-axle) is carefully matched. This careful match, in turn, can only be achieved if all these major components are designed and produced by the same company.

Iveco (the commercial vehicle division of Fiat), Daimler-Benz, MAN, Daf, Volvo, Scania and Renault's truck division, all make their own diesel power units.

In the U.S. heavy truck market, the situation is very different. The number of "options" offered by the American truck makers is at a level which would be considered unthinkable in Europe.

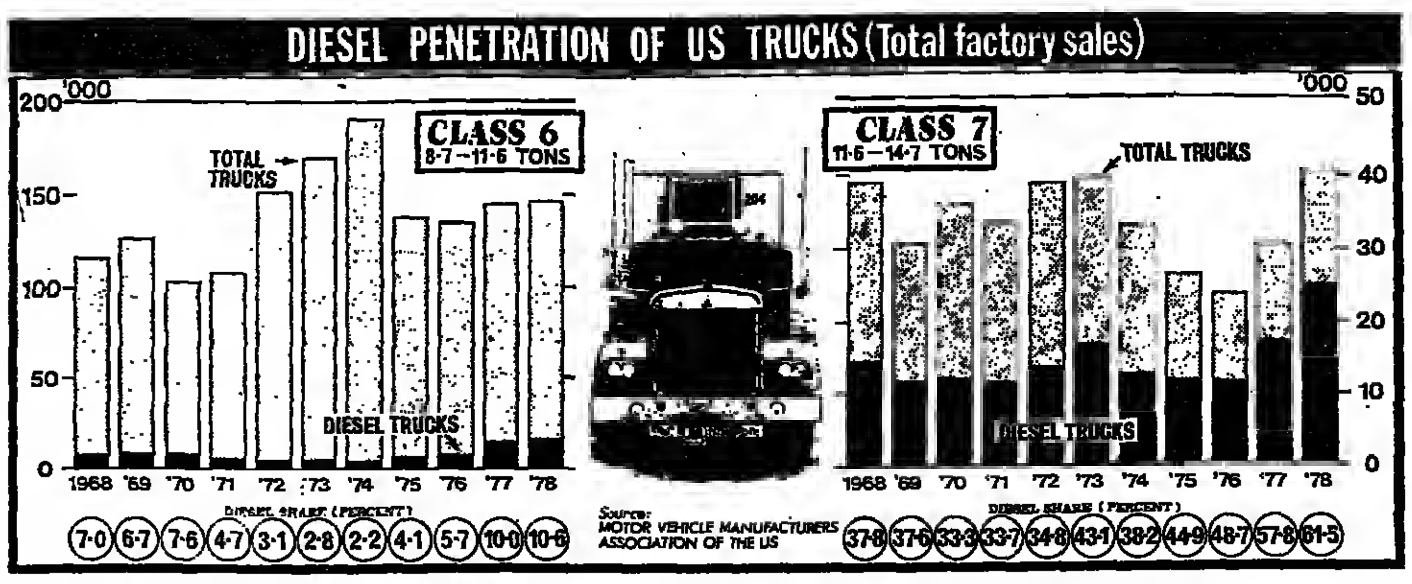
A survey by Borg-Warner Corporation showed, for example, that in 1978, U.S. fleet operators who bought trucks specified the type of engine for each truck in 99.9 per cent of cases. This compared with a 90 per cent specification for cabs.

Opinion split

To some extent the UK has followed the U.S. system, and heavy truck operators could often be said to buy a diesel engine with a truck around it, specifying the fitting of an engine from one of the independent suppliers.

Of course, Leyland, Bedford and Dodge would prefer to sell a truck with one of their own diesel engines as the power-unit. But pressure from the market-place often dictates that they should offer an "optional" engine from an independent manufacturer. New vehicles are often designed with this in mind.

There is a major split of opinion in the truck industry about whether the independent will be gradually squeezed out of business by the fast-rising costs of diesel engine development, not only to meet the customers' demands for better fuel consumption figures but also to conform with legal requirements on noise and emissions.



But the independents use precisely the same arguments to try to prove to the truck makers that they should spread the enormous costs of keeping up with modern technology by allowing specialists to share the load—including specialist diesel engine manufacturers.

The problem for the truck-makers, even if they accept this argument, is that they have so much invested in their diesel engine operations already and so many people employed in them. And commercial vehicle makers predominate in the current list of manufacturers of 30hp to 500hp diesel engines—the type normally used in vehicles.

While Perkins, the world's biggest manufacturer of diesels, tops the list in this category, the others in the top half-dozen include Daimler-Benz, Ford, Isuzu, General Motors and Fiat's Iveco. (It could be argued in this context that GM's subsidiary Detroit Diesel Allison ranks as an "independent" because it supplies other manufacturers on equal terms.)

Faced with heavy development costs, the commercial vehicle makers have tended to look for joint ventures with other companies in the same line of business. This is as true for diesel engines as for any other major component.

As the cost of fuel rises, commercial vehicle operators are becoming more willing to consider diesels for smaller trucks, even though the initial price and maintenance costs might be higher than for a petrol engine.

This is particularly the case in the U.S. where the extraordinarily low cost of oil products has held back the spread of diesel engines for trucks. Mr. James Capolongo, a Ford vice-president and general manager of truck operations, suggests that the current 10 per cent share of the U.S. medium-duty truck market held by diesels will soar to between 50 and 60 per cent by 1985 — provided U.S. engine manufacturers can match the demand.

This expectation shared with many other forecasters, has attracted some European truck groups, sensing a possible opportunity to break into the American market with medium-weight diesels. Daimler-Benz is setting up a truck plant in the U.S. (supplied with Brazilian diesels); Renault has linked with the local Mack Trucks and is selling French-built, medium-weight diesel trucks through the American company's network. Iveco is setting up its own distribution network.

New products

The indigenous U.S. diesel engine producers will not let the new opportunities go uncontested. The major producers of the medium trucks in Class 6 (9 tons to 11.8 tons)—Ford, General Motors and International Harvester — are all taking steps to improve their position in diesel-powered vehicles. And the engine manufacturers, notably Caterpillar, Cummins and General Motors through its Detroit Diesel Allison offshoot, are developing new products to meet the growing demand.

Currently Cummins engines power more than 41 per cent of all diesel-engined trucks in the U.S. But Caterpillar, particularly with its 3,208 engine, claims about half of the mid-range diesel truck business.

Earlier this year Detroit Diesel Allison launched its 8.2 litre diesel, specifically designed for the medium-duty market, with the help of Ford, its major customer. The engine is being used by Ford, which significantly calls it the "Fuel Pincher," Chevrolet (another GM offshoot) and, as an option, by International Harvester.

There seems little doubt, therefore, that in the long run it will be the U.S. diesel engine makers who will get the greatest benefits from the switch to diesels by medium-weight truck operators in North America.

Kenneth Gooding
Motor Industry Correspondent

Car drivers reluctant to change from petrol

ENCOURAGED BY the oil supply crisis of the mid-1970s and the subsequent steep rise in the cost of fuel, sales of diesel engines for cars have roared ahead by 20 to 25 per cent a year. But will this growth pattern be sustained?

There is ample evidence to show that unless they are given very special incentives, car drivers would prefer not to have a diesel engine under the bonnet.

Diesel engines have characteristics which car drivers, particularly in Europe, find unacceptable. They give sluggish performance, causing the driver to wait some time before they can be started from "cold," and are noisier than the petrol types.

They are more expensive to buy than petrol engines because they need a complicated fuel injection system and a more powerful starter motor and battery to turn over an engine which works at a much higher compression ratio. This complication means that, although diesels last longer, they need more maintenance.

So motor industry forecasters are almost unanimous that although diesels have some part to play in the car markets of the future, it will be a relatively minor role. Different analysts variously predict that diesels will settle at 5 per cent or 10 per cent or even 15 per cent of total car sales.

Diesel engine performance can be boosted—by turbo-charging, for example. Volkswagen has presented a view of the future (1988) when lightweight, turbocharged diesel engines will be offering 100 miles an hour performance and 70 miles per gallon economy.

Economy

This points once more to the underlying reason for the surge of interest among the car companies in what would otherwise be an unsuitable power unit. Diesel engines offer much better fuel economy than equivalent petrol engines. Opinion varies as to how much. But even the more conservative engineers agree that diesels show at least a 25 per cent overall improvement in fuel consumption.

The diesel shows its greatest advantage under "part-load" conditions. In stop-start urban motoring, a diesel car returns consumption figures up to 50 per cent better than an equivalent petrol-engined car. (This is the main reason Germany has all those diesel-engined Mercedes taxis in its towns.)

But, while hedging their bets with diesel engines, motor manufacturers are putting enormous investment into developing petrol (or Otto cycle) engines. The aim is to achieve diesel-like fuel consumption without the drawbacks or expense of a diesel engine.

The petrol engines of the past were highly inefficient. At full-load (high-speed, high-mileage motoring), an average petrol engine yields about 30 per cent of its potential energy with the remainder lost in the cooling water, exhaust and internal friction. At part-load (urban, stop-start motoring) the efficiency is about 8 per cent.

There seems no reason why petrol engines capable of 70 mpg at 70 mph should not be a feature of motoring in the 1980s. And as long as the manufacturers can keep fuel consumption figures improving steadily, there will be no incentive for car drivers to turn to diesels.

Another important factor during the 1980s will be increasing use of fuels other than oil for car engines. The Otto cycle (petrol) engine lends itself to the use of alternative fuels and needs relatively minor changes even to be able to cope with two fuels on one journey; perhaps using alcohol for part of it and then switching to petrol for another.

Diesel engines need too many add-ons (such as special fuel injection systems) or additives (such as ignition-assistance additives) to make them a really feasible proposition for use with alternative fuels. But who knows how demand might be stimulated as the price of oil rises?

In the past those countries without much oil of their own have encouraged the use of diesel for all forms of transport — including cars — by their pricing policies. In Italy, Japan, Spain and Sweden, the price of diesel fuel is less than half that of petrol. The same goes for Brazil but the Government has introduced regulations which rule out the use of diesel cars there.

But above all the drive by the U.S. to cut back its oil imports will have a profound effect on the world diesel car statistics.

To stamp out "gas guzzlers" the U.S. Government has introduced stringent fuel economy standards the car makers must meet during the 1980s. American manufacturers have been told they must push up the average fuel consumption across their ranges of models to 28.5 miles per U.S. gallon, against the 18 mpg achieved last year.

General Motors, the world's largest car producer and the group which dominates the North American market, feels that the diesel engine is probably the best means available to meet the Corporate Average Fuel Economy (CAFE) targets while continuing to be able to offer customers big, six-seater cars.

GM will produce 300,000 diesel cars this year, rising to 500,000 in 1981. By 1985 about 20 per cent of its total car output could be powered by diesel engines the group insists. The group produces around 5.5m cars each year.

GM's strategy helped to push the diesel-engined car's share of North American production from 0.4 per cent in 1978 to 2.2 per cent last year. But the big constraint on the spread of dieselisation in the U.S. is the lack of a service network to deal with the cars. America does not have nearly enough service engineers capable of doing a good job on a diesel car—which may explain why GM has had some headaches with its diesel programmes.

Company officials acknowledge that many people who bought GM diesel cars have experienced problems and as a result the group is having to face large warranty costs. It has also stepped up spending to prevent more problems developing in the future.

Damage done

However, much damage has been done. Consumer groups, such as the Centre for Auto Safety in Washington, says complaints about diesels have been "streaming in." Some frustrated car-fleet operators have stopped buying diesel cars and one successfully sued GM.

Last autumn a car market research company, J. D. Power and Associates, polled 500 owners of 1979 Oldsmobile diesel cars (made by GM) and found 75 per cent had encountered one or more engine problems. All this has not improved the diesel car's "image" in the U.S.

GM's main rival, Ford, has been a far-from-fervent supporter of diesel cars, though it seems prepared to meet demand if it grows. In Europe, Ford is offering a Peugeot diesel in its large cars, the Granada models, in those countries where demand exists. So far Ford has no U.S. diesel cars but at least one has been promised.

An indication of Ford's attitude came last December, when the company pulled out of a joint diesel engine development project with Cummins "because of our confidence in our own advanced petrol engine technology."

Ford said that it believed its advanced "Proco" engine would provide the required fuel economies for the U.S. in the mid-1980s. It uses a "leaner" petrol mixture—one that is not so highly concentrated.

The future of the diesel car in the U.S. is also clouded by legislation about emission controls. NOX (nitrous oxide) emissions are extremely difficult to design out of diesel engines.

Outside the U.S., there will always be a steady demand for diesel cars wherever diesel fuel is deliberately held at a lower price than petrol.

But there will be no explosion of demand unless diesel cars become "fashionable" for some reason. There are some signs that this could happen—the prime example being the success of the diesel version of the Volkswagen Golf, which was bought as much because it was a "fashionable" vehicle as for its frugal use of fuel.

Kenneth Gooding

Steam turbines lose on grounds of cost

THERE IS considerable discussion currently about the merits of coal-fired ships and the possible revival of sail-powered vessels. The Japanese have already built a prototype commercial sailing ship and an Australian company has ordered some coal-fired ships.

However, the main marine propulsion unit for the foreseeable future will remain the diesel engine and, far from losing market share to other forms of propulsion, the marine diesel seems destined to increase its dominance in the field of ships' engines. Currently just under two thirds of the world fleet is powered by diesels.

In the early 1970s over a third of the installed horsepower of new marine propulsion units was provided by steam turbines. This was because turbines are highly reliable, and for the very large crude carriers (VLCCs) and fast container-ships needing engine outputs of over 30,000 horsepower, there was no viable diesel alternative.

Since then two things have happened. First, the price of ships' bunker fuel has soared; and second, engine designers have made major strides in the development and performance of marine diesels.

As a rough rule of thumb a VLCC powered by steam-turbine consumes around 170 tons of heavy fuel oil per day, whereas a diesel-driven equivalent consumes just over 100 tons per day. Assuming a ship is at sea for around 300 days a year, the annual fuel costs of a steam-turbine VLCC amount to $9m a year. The costs of a diesel-powered tanker amount to $5.5m—a saving of $2.5m per year.

As a result well over 90 per cent of the installed horsepower of ships' propulsion units under construction are now diesel, compared with just under two thirds only seven years ago. In addition, many shipping companies with fleets of steam-turbine tankers and container-ships, are actively considering replacement of their steam-propulsion units with marine diesels.

Unless there is a sharp fall in fuel prices over the next decade the running cost advantages of diesel engines over steam turbines (of the order of 25 per cent) will dictate that shipping companies will plump for either slow or medium/high speed diesel engines. The cost savings outweigh the advantagea of reliability, easy maintenance and compactness, traditionally associated with turbines.

Two other important factors are the shift from large ships to smaller vessels and the increased maximum power of diesel engines (up to 55,000 bhp with a single slowspeed diesel and 65,000 bhp with two medium-speeds). This means that diesel engines are able to provide virtually all the world marine propulsion needs.

Problems

The combination of technical and financial advantages assures the dominance of diesel engines in the marine propulsion market for the time being, but the outlook for the diesel engine builders is not without problems. Most pressing are the continued recession in world shipbuilding and the steady decline in the quality of ships' bunker fuel.

Few people outside oil and shipping companies are aware that a large part of the world's shipping fleet burns oil of such low quality that it is virtually useless for any other purpose. "Bunker C," the main marine fuel, tends to be what is left after an oil refinery has "cracked" or distilled its refined products. The large jump in the price of oil means that oil companies are under pressure to maximise the amount of refined products they produce from a given barrel of oil. This, in turn, means that the amount of residual fuel oil available for ships' bunkers is decreasing and what there is, contains more and more impurities.

Engine-builders are now working on the assumption that there will be a further major deterioration in fuel quality within the next few years. The viscosity of the average bunker fuel, which determines how easy it is to handle and store, is forecast to increase from 2,000-3,000 seconds to 5,000-6,000 seconds. The sulphur content, an important contributor to engine wear, is expected to rise from 2 per cent to 5 per cent, and the carbon residue content is expected to double to 15-20 per cent by weight.

The engine-builders' main concern is that their engines should cope efficiently with the combustion of the poorest fuels. This concern lies behind the rivalry between the low and medium speed diesel engine designers. The low-speed builders, led by Sulzer Bros., claim that low-speed engines are better equipped to cope with low quality fuels than medium-speed diesel engines. Sulzer Bros. has over a third of the entire marine diesel market.

A slow-speed marine diesel is normally defined as any engine with less than 250 revolutions per minute. It is normally a two-stroke engine. Since it does not need a gearbox it tends to be more efficient. Less cylinders are involved and maintenance and lubrication costs are lower.

The medium-speed diesel engine-builders argue that their products, which normally give up to 900 revolutions per minute, can burn fuel just as poor as the slow-speed diesel engines. In addition, they are more compact (making them ideal for ferries, etc.) and they generally cost less than slow-speed diesels.

The medium-speed engine-builders have been waging a campaign to increase the use of this type of engine. Often a ship will have two medium-speed diesels whereas it might only have one slow-speed diesel. This gives more flexibility. If one engine breaks down a ship can still maintain power—an important safety factor, particularly for large tankers.

The leading medium-speed engine designer, Pielstick, of France, has worked hard over the last five years to build up its market share. In 1975 medium/high-speed diesels had just under 20 per cent of the entire marine propulsion market; last year their market share had risen to just over 30 per cent.

Last year a total of 1,068 engines, totalling 9.5m bhp, were installed in 897 ships, according to statistics published by The Motor Ship. Some 6.1m bhp were slow-speed and 2.9m bhp were medium/high-speed. Only 0.5m bhp (5.7 per cent of the market) were steam-turbines.

LEADING MARINE ENGINE BUILDERS—1979

	Engines	Total bhp (1000's)	Market share (%)
SLOW SPEED			
Sulzer	210	3,164	51.8
B & W	130	1,649	27.0
M.A.N.	56	667	10.9
Mitsubishi	61	395	6.5
Doxford	13	122	2.0
G.M.T.	6	109	1.8
MEDIUM/HIGH SPEED			
Pielstick	138	1,150	40.1
M.A.N.	40	361	12.6
Sulzer	51	255	8.9
MaK	68	253	8.8
Deutz	40	112	3.9

Source: The Motor Ship

WORLD ENGINE OUTPUT

	Number of ships	Total hp (millions)
1970	1,145	11.3
1971	1,211	12.8
1972	1,152	15.0
1973	929	13.8
1974	1,012	14.2
1975	1,027	14.7
1976	1,064	14.8
1977	1,014	12.6
1978	1,091	11.5
1979	8.55	9.0

Source: The Motor Ship

Rivalry

The rivalry between the diesel engine builders is most acute in the area of re-engining. An analysis carried out by Switzerland's Sulzer Bros in April showed that among 42 ships due for conversion from steam to diesel engines, 62 per cent of the 1.54m bhp to be installed, was accounted for by slow-speed diesels. The firm had 70.3 per cent of that market. The remaining 38.5 per cent of the conversions were medium-speed. Pielstick had 48.5 per cent, M.A.N. had 29.9 per cent and Stork-Werkspoor, 21.6 per cent.

As a rough guide virtually all of the container-ship engine conversions have been to slow-speed diesel, while most of the large tanker conversions have been to medium-speed.

Between 1970 and 1978, some 900 large ships were constructed with steam-turbine engines. Many of these ships, which have a combined power of over 30m hp, will be candidates for conversion. The medium- and slow-speed engine-builders are fighting hard for a share of the market which could be as much as 2.5m bhp per annum—equivalent to over a quarter of last year's entire engine output.

Amalgamated Power Engineering, Britain's licensee for Pielstick engines, recently commissioned a report on the size of the conversion market. It looked at the case of a 1500 TEU container-ship and estimated that conversion to slow-speed diesel would save $1.6m a year. With medium-speed, the saving would be $1.73m. It identified a potential market of 45 ships.

It found a much bigger market amongst tankers of over 200,000 dwt. By installing a medium-speed diesel, an owner could save $2m per year. Up to 680 tankers are potential candidates for conversion but the actual number is likely to be far less because many tankers are not worth converting given the large surplus of VLCCs in the world.

The possibility of re-engining a large number of the world's steam - turbine - driven ships should give a welcome boost to the fortunes of the marine diesel market. But the main factor affecting the engine-builders will be the health of the world shipbuilding industry.

In common with most shipbuilders, the major engine-builders have suffered badly from the shipbuilding recession. World engine output fell from a peak of 14.8m hp in 1976 to 9.0m hp last year. Denmark's Burmeister and Wain, the second biggest slow-speed diesel engine builder, has been particularly hard-hit and this lies behind its link-up with M.A.N. of Germany. Another casualty has been Britain's Doxford, which is stopping its engine-building operation.

William Hall
Shipping Correspondent

Economy influences boat owners

THE TREND towards adoption of the small marine diesel engine as the standard propulsion source for fishing boats, work boats, and pleasure boats, is continuing in spite of economic recession in many countries. Manufacturers' estimates of annual demand in the Western world for nearly 60,000 units in the 30 hp to 300 hp range is worth some £150m, are probably not far off the mark.

Small diesel units have long been seen by customers as having an edge over petrol units in terms of reliability safety and longevity. As fuel costs loom ever larger in the average boat-owners' calculations, the economy achieved by modern lightweight high-revving diesels has become the most important single selling point.

Small engine sales have faced difficulties in the U.S. and Europe in recent months because of poor trading conditions generally and high interest rates. Fishermen, for instance, have been reluctant to order new boats or to replace engines on their current boats. But the diesel has become the standard unit in the fishing fleets of many Third World countries, and the volume of orders from that quarter is continuing at a high level.

The Third World is demanding and getting—robust engines of simple basic design that can easily be fitted into inshore fishing boats. They can be maintained by following simple servicing rules, and by the replacement of vital parts such as injectors and pumps.

More sophisticated versions of the basic engines now available are also offered by manufacturers to boat-owners who want a comprehensive power package.

Space and weight factors used to deter the average owner of a small pleasure boat from trying to "shoe-horn" a diesel engine into a cramped engine compartment. But the majority of modern yachts are now being designed round diesels of adequate power, and the engines used by African and Asian fishermen are proving sufficiently versatile to meet the needs of yachtsmen in the European and American sailing centres. The addition to the basic engines of powerful electrical generating and control systems, starting motors, turbochargers, and even refrigeration compressors, is providing the nearest to a total power package that amateur sailors have yet been able to enjoy.

Some makers such as Volvo, Saab, Bukh of Denmark, and Perkins, are treating the small marine diesel as a specialised market, for which engines have to be specifically designed and built. Others choose to "marinise" truck engines to a standard that will make them suitable for sea work.

Impact

Within the last two years, the new popularity of the diesel car-engine has also begun to make an impact on the marine market. These engines are becoming an increasingly popular choice for boats because of their availability (the Volkswagen Golf diesel is the most obvious example) and competitive pricing made possible by volume production. If the trend towards diesel cars continues, as many expect it will, the car-makers look like becoming major suppliers of basic diesel units for work boats, fishing boats, and pleasure boats. This could threaten some of the companies concentrating upon marine diesels, and a number of them are already feeling uncomfortably exposed to the competition.

BMW, of West Germany, has not simply set about marketing an automobile diesel for marine use. The company has established its own marine engine factory in Bavaria to make a range of small engines up to about 30 hp.

Most of the car manufacturers making small diesel engines are eyeing the marine market as an outlet for diesel units in one form or another. For instance, the new Peugeot 4.90 automotive engine is being sold also as the Status-marine 4.

Diesel engine manufacturers have found little difficulty in capturing markets for boats designed to proceed at conventional speeds, which are linked to factors such as waterline length and displacement of the vessel. Until recently, however, diesels have been less acceptable as power units to lovers of high-speed planing craft: principally because a higher power-to-weight ratio can be obtained from a highly-tuned petrol engine.

Even that picture is changing now. The success of diesel-engined craft in some senior powerboat races has helped change attitudes. But the biggest single factor has probably been the development of reliable marine "outdrive" units, which enable diesel engines to be linked satisfactorily to the special forms of final drives and propeller configurations required in high-speed craft.

Turbo-charging of diesels has been improved to the point where it can be incorporated in marine models from which high power-to-weight performance is required.

At the other end of the diesel engine spectrum, new design ingenuity is being applied to make the diesel suitable for even the most primitive craft used in developing countries. A good example is the work done by Petter Marine Diesels, part of the Hawker Siddeley Group. Petter has introduced a diesel alternative to that most versatile of light power-packs, the petrol-fuelled two-strike out-board engine.

It consists of a lightweight air-cooled diesel engine clamped to the transom (stern-end) of a boat. A long shaft projects over the stern with a propeller on the end. Petter says a 6 hp version uses only 2.7 pints of fuel an hour, compared with 14 pints an hour for a comparable petrol outboard.

The British boat-building industry saw its total exports for 1978-79 fall by some £7m to just under £100m for the year. However, sales of British-made engines have continued to outperform the boating industry as a whole.

During 1978-79, sales of British outboard and inboard engines on the home market rose in value by some £14m to £44m for the year. Exports of engines, meanwhile, rose in value from £11 to £14m. These figures, compiled by the Ship and Boat Builders' National Federation, may include some engines destined for industrial uses. But they give a firm indication that the British small marine engine producers (whose range is predominantly diesels) are more than holding their own in difficult world markets.

Roy Hodson

Big fall in generator sales

MANUFACTURERS OF diesel generating sets in the UK are going through an extremely bleak period. The recession at home has combined with a depressingly familiar combination of difficulties in overseas markets, where only a few years ago the British enjoyed great strength.

The strength of sterling, the relative weakness of the dollar and the Italian lire, and increasing pressure from the Japanese and Koreans have all helped to erode the competitiveness of the British product. Political turbulence and instability in Middle Eastern and African countries—hitherto the main buyers of power-units—have also resulted in a marked decline of the total world market.

In 1977, when total orders in the markets available to UK manufacturers reached about 170,000 sets, the industry was well placed to take advantage of the boom. The miners' strikes of 1973 and 1974 had brought fears among British managers that winter disruptions of the electricity supply could become a regular feature of our island's calendar. The surge in orders for standby units after the strikes resulted in a considerable increase in capacity among the major set manufacturers such as Petbow and Dale, and a welcome expansion of business for the main independent manufacturer of alternators, Newage Engineers.

Assembly

A large number of very small companies also sprang up, many with only half a dozen employees, to assemble sets from bought-in components and for sale to the emerging markets in the Middle East. Two years ago, there were about 150 such firms in the UK. By 1978 when domestic demand was falling away, the UK still had about half the world market (not including Japan, the U.S. and other "closed" markets) which was running at about 140,000 sets a year.

Last year, exports of sets from the UK fell substantially, to little more than 55,000 sets. The fall has continued even more sharply this year and some industry estimates put total exports so far at only around 12,000 sets.

Smaller sets have been the main casualty, coming under strong pressure from Japan and the Far East. In Saudi Arabia, for example, which only a few years ago was a lucrative market for the UK Japanese manufacturers have taken an estimated 80 per cent of the market for the smaller (3 kVA to 10 kVA) machines by the familiar strategy of flooding the market with very high quality machines at extremely low prices.

The rapid erosion of market share has been much more marked among smaller set manufacturers. Petbow and other companies whose sets are in the range 25 kVA up to 4MVA have been less susceptible to competition from mass produced Far Eastern machines. Even so, the company suffered a 17 per cent decline in sales between 1978 and 1979. The group reported a loss of £898,000 in the year up to March, compared with a profit of £1.6m the previous year. The turnover of Dale Electric also fell nearly £1m to £24.2m in the year up to March 1980, while pre-tax profits fell £2m to only £1.3m.

Dale is hoping to improve its fortunes by moving up-market into the manufacture of high-voltage sets at a new factory in Leeds. Petbow is trying to streamline its operations and to introduce a new range of more sophisticated sets controlled by integrated circuit technology.

For the smaller "garage-sized" manufacturers, fortunes have been very mixed. Those which exported to Nigeria and Iran went out of business after the sudden collapse of the market. Others, which have made specialist sets for particularly harsh conditions, such as North Sea rigs, have struggled to survive.

However, the strength of sterling has meant that all manufacturers are facing fiercer competition. The challenge comes from Italy and the U.S., which can both offer cheaper sets, and from Germany, where the major manufacturers, led by Siemens and AEG, can match the sophistication, and specialist applications which have been the strong point of UK manufacturers.

All these difficulties have had a direct impact on the suppliers of diesel power units. This has been particularly marked for those, like Rolls-Royce, which have relied on sales to set-makers. Companies such as General Motors, Caterpillar and *Cummins in the U.S.*, which have tended to put their power units together with alternators to make low priced standard generating sets, have suffered less.

However, if the outlook for set-makers is bleak, the long-range forecast for the market continues reasonably fair. Electricity is not just the food and drink but also the oxygen of industrial life. More and more complicated machines and computers are being built which cannot tolerate even a few minutes' interruption of supply.

The demand for standby or emergency units is therefore likely to increase throughout the civilised world, not just in hospitals and military establishments, but also among ordinary businesses. The possible losses which can result from a power failure will prompt many businessmen to instal their own generators, particularly in countries where the main public utility has a bad record either because of strikes or a poor grid system.

For many British manufacturers, however, particularly the smaller ones, the urgent question must be whether they can hang on long enough to benefit from an improvement in trading conditions. The immediate future looks grim, so that cut-backs, mergers and rationalisation are much more easy to foresee than any future revival.

Max Wilkinson

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Components manufacturers take optimistic view

BRITISH MANUFACTURERS of components for diesel engines, whose main customers in Europe are suffering from a severe slowdown in demand, are inevitably feeling the side effects, but most are optimistic about the outlook in the medium and long-term.

The de-stocking of components earlier this year by major buyers such as Perkins, was the first sign of trouble for many suppliers, but this is now thought to be past the worst and demand has improved slightly, particularly for parts going into engines for generator sets.

In general, British component suppliers have taken a fairly cautious view of the predicted boom in world diesel engine sales, which many believe will take longer to develop than had first been thought. Given the present circumstances, their caution has been justified.

Although some companies such as Lucas CAV have successfully invested in production facilities in the U.S. (a potentially very large market for diesels but developing slowly) many have concentrated on maintaining or increasing their share of the continental market.

With fuel economy now a high priority in Europe and demand for diesel car engines growing fast, UK component suppliers to companies such as Volkswagen, Daimler-Benz, Fiat and Peugeot see good prospects for immediate growth.

Lucas CAV, which shares the major part of the European fuel injection equipment market with Bosch, has suffered recently from the poor demand for commercial vehicles, but with a good spread of business in other sectors, it is optimistic, despite recent redundancies.

Expansion

The company has recently completed its Greenville, South Carolina, plant, to supply fuel injection equipment to the Oldsmobile division of General Motors under a £80m contract, and sees this as a potential base to expand U.S. production. The U.S. market for pick-up trucks, now running at about 4m vehicles a year, is regarded as a major target if and when diesel engines are more widely accepted as power units.

Associated Engineering, which attributes nearly half its £370m a year turnover to original equipment and spares for diesel engines, has also suffered from what it describes as widespread de-stocking by its customers, but the completion of its £10m piston ring plant at Plymouth is a show of confidence.

High volume batch production at the plant will be aimed mainly at the U.S. market, where it believes demand for high value products such as rings and bearings can best be met from its UK facilities.

Overall, the company produces a very large range of components, including bushes, pistons, cylinder liners, castings and cylinder heads for larger diesels. Its customers include virtually all major diesel engine manufacturers in Europe.

AE also has plants in France and Italy, producing pistons and cylinder liners, but as in the rest of Europe, demand in these countries is weak. Much of AE's competition on these products comes from Sheepbridge Stokes, now a subsidiary of GKN, in tha UK and Mahle and Karl Schmidt in Germany.

However, AE believes that work baing done by its Wellsworthy subsidiary on computerised products evalnation, enabling it to reduce the development periods on components considerably, will assist it in improving European market penetration.

The biggest UK supplier of forged diesel components such as cranksbafts, conrods and camsbafts is GKN, which has five divisional companies with a total forging capacity of 250,000 tonnes a year supplying the automotive and allied industries. Customers inclnde Cummins, Perkins, Gardner, Volvo and Saab-Scania, Daimler-Benz, Daf and Mack trucks and John Deere in the US.

The company covers a broad range of engine sizes right up to large marine diesels, where demand has been particularly poor recently. Overall, nearly 20 per cent of sales by GKN forging companies are overseas.

Birmid Qualcast, a leading supplier of castings such as cylinder blocks and heads, has suffered considerably from the problems in the past few months in the commercial vehicle industry, but reports some improvement in demand from companies such as Listers and the larger engine makers.

It attributes this to improved export orders for engines used for industrial or agricultural purposes, particularly those of simple and robust design. Although the company's export activities are being hindered by the strength of sterling and widespread over-capacity in the foundry industry, it is hopeful about further sales in North America.

Perkins, a major buyer from GKN, Lucas, CAV and AE, acquires around 80 per cent of its engine parts from outside sources, mainly in the UK, although it often pursues a policy of dual sourcing. Now facing serious difficulties due to the poor farm equipment market worldwide, Perkins is making streouous efforts to contain costs and sterling's strength is making some foreign components look attractive in terms of price.

With the company now spending around £150m a year on UK-made components, it appears that British suppliers wil also need to keep a close watch on costs if they are to retain their UK market aod make headway in Europe.

Lorne Barling

High interest rates hit U.S. tractor sales

AGRICULTURAL VEHICLES are a major application for diesela, accounting for as much as 20 per cent of diesel output. The prime application is to power tractors, and it is therefore worthwhile to look at this sector in some detail.

Tractor manufacture is highly concentrated among a few big multi-nationals in North America and Europe, while Japan is becoming more significant in international sales. The multi-nationals are complemented by tractor companies which make and sell them mostly on a national basis, although in some cases these companies are manufacturing under licence from the multinationals.

The main areas of tractor production therefore are: North America, Europe (particularly the UK, France, Germany and Italy), and Japan. Some of the East European countries also have sizeable tractor industries some important on an international scale. Those other countries which have a fair-sized output such as India, are producing mostly for their own markets.

The multi-nationals are: John Deere (the world's largest agricultural equipment manufacturer), Ford, International Harvester and Massey-Ferguson. Another major U.S.-based company is J. I. Case, subsidiary of Tenneco, whose European interests include David Brown Tractors in the UK. On a smaller scale, but each with exports accounting for a significant proportion of sales, are companies such as Renault, Fiat, Leyland, Deutz, Lamborghini and Same. Caterpillar also sell tractors for agricultural usage.

Each of these companies has its own diesel engine manufacturing facilities—sometimes in-house, alternatively buying from a subsidiary company, as in the case of Deutz, and Massey-Ferguson, buying from Perkins.

Sales of tractors, and the type of tractor, are determinad by a number of kay factors: agricultural methods, farmers' incomes, and in the developing world—a big market for tractors—the availability of international financing.

The level of income received by the farmer depends in turn on a number of considerations as well as the more traditional influence of good barvests. These include support payments, the Common Agricultural Policy in the EEC, and grain embargoes to the Soviet bloc such as that in the U.S. earlier this year.

So far 1980 has been a very poor year for tractor manufacturers in the West. A combination of factors, of which high interest rates was particularly significant, took a severe knock at North American sales in the spring.

Short time

All the big tractor companies have put their workforces on short time and/or closed down for long periods this summer. The final ootcome will depend heavily on the willingness of farmers to commit themselves to purchases this autumn.

The multinationals' European plants have also been hit by the North American downturn. As an example, International Harvester's plant in Doncaster, England, is the sole source for the small IH tractor, many of which sell as second and third tractors on big U.S. farms.

Nor has the European situation been much hetter. Demand in the UK, for instance, has dropped by abont a quarter this year—heavily influenced by the level of interest rates, as well, say the farmers, as a big reduction in their real incomes over the past couple of years.

European tractor plants are also tied in closely with the buoyancy of markets in the developing countries. For instance, many tractor companies felt the pinch when the Turkish market dried up completely three years ago because of the country's international credit problems.

On a longer-term view, certain trends can be projected: sales in the UK, France, Germany, Scandinavia and the Low Countries are likely to settle at a somewhat lower level than over the past decade (after ironing out the cyclical variations, which are considerable for tractors). This is because the move to mechanisation, in Germany and France in particular, has gone largely as far as it is likely to.

In southern Europe, however, there is considerabl scope for greater mechanisation. In Italy, the move towards four-wheeled tractors will accelerate, while agriculture in Greece, Spain and Portugal will all become more mechanised if and when these countries join the EEC

Like North-West Europe, the North American market is mature, but it can be expected to recover from its current low point as general economic conditions improve. Some observers believe that low horsepower Japanese tractors will also become more noticeable in Europe and North America—the type of tractor in which Japanese manufacturers specialise.

The pronounced trend in European markets in the past few years, however, has been towards the higher horsepower tractors. In the UK, for instance, tractors in the 65-79 hp range are now the most popular, wheras only three years ago it was those in the 50-60 hp range.

The lower horsepower tractor is still most in demand in the developing countries, as well as in Japan where agricultural conditions are different from those in Europe.

H.D.

Reliable market for fuel

BRITAIN IS behind Continental Europe in its consumption of automotive diesel fuel—but sales in the UK are slowly creeping upwards year by year.

Throughout Europe, the automotive diesel fuel market falls into two distinct sectors: commercial transport, and retail, which covers ordinary, saloon-car motorists. In Britain last year 6.58m tonnes of diesel fuel were sold, of which 5.329m went to commercial customers and only 0.729m to the retail side.

This amount was less than half—37 per cent—of the 17.7m tonnes of petrol that were sold through retail outlets in the UK last year. What is more, demand for diesel fuel this year is lower than last year. The oil industry estimates that consumption will be 1.1 per cent lower overall, but 6.7 per cent down on the retail side and only 0.3 per cent down in the commercial sector.

The recession is the main reason for this year's fall in diesel consumption in Britain and the rest of Europe. As production is cut back, factories close and demand for consumer goods of all types drops, there are fewer commercial vehicles on the roads and therefor lower diesel sales.

The tiny proportion of private motorists whose cars have diesel engines are also cutting back on car outings. Yet the major oil companies are looking for a slow but sure growth int he disel market once the slump ends. They are forecasting an 8.5 per cent increase in sales in the UK between now and 1985—all of it on the commercial side. They expect commercial sales to grow by about 9.8 per cent, while they predict that retail sales may actually fall by 1.5 per cent during the next half decade.

The advantages of diesel engines have always been fairly clear-cut to commercial transport companies—though less so to British concerns than to their Continental counterparts. But the pros and cons of diesel are far more nicely balanced for private car-drivars.

More reliable

Diesel engines are more reliable than petrol enginea and give between 15 per cent and 20 per cant more miles to the gallon. But they are also less powerful, heavier, smellier, noisier and—most important—more expensive than petrol engines.

Reliability and the higher mileage per gallon easily outweigh the disadvantages as far as road haulage companies ara concerned. The extra capital cost of buying a diesel vehicle can be quickly recouped through lower fuel costs and reduced maintenance charges. Nor do lorries need to turn in particularly powerful performances—road haulage operators do not want their drivers to act as if they were behind the wheel of a sports car.

The lower cost of diesel as opposed to petrol is considerable for the commercial sector. Although the retail pump price of diesel is in line with that of four star petrol, road haulage operators buy in bulk and can therefore demand a sizeable discount. But it is hard to know exactly how cheaply a large transport group can buy diesel—both the oil companies and their road haulage customers are coy about quoting bulk diesel fuel prices.

Trucks can also take full advantage of the extra mileaga per gallon offered by diesel engines—far more so than the private motorist who does not cover such long distances.

For these reasons, all lorries and buses of over 3 tons' weight are powered by diesel engines in Britain today, and the numbar of smallar commercial vehicles running on diesel is also increasing steadily. But on tha Continent, the switch to diesel for the commercial sector came much earlier, aven the smallest vans tend to he diesel-powered. This is why nearly all the diesel engines in the UK are foreign made.

From the oil companies' point of view, the diesel market bas a number of attractions over the petrol market. It is more reliable, since commarcial vehicles keep rolling whatever the weather. By contrast, sunshine, or the lack of it, can have a dramatic influence on petrol sales to private motorists. And it is the commercial sector of the diesal market that is imporant to the oil companies.

Commercial diesel customers also have their own large-scale tanks, which means the oil companies can make a small saving on the capital cost of their own storage.

The recession coupled with the current, comparatively high crude oil production rates of the Organisation of Petroleum Exporting Countries have helped produce a glut of petrol and of other oil products at present. But even after the economy starts to turn up again and world oil production is reduced—OPEC is likely to agree on production cuts this autumn—Britain is still likely to have a small surplus of gas oil, the refined prodnct which is used to make diesel.

Oil companies in the UK therefore have an added reason for welcoming the expected increase in the diesel market. On the other hand, automotive diesel fuel is marginally more difficult to make, in some cases.

Throughout Europe, oil companies are upgrading their refineries to obtain more flexibility in their product "mix" and, in particular, to obtain more of the lighter oil products such as petrol. The catalytic cracking units that are being used to upgrade refineries produce motor gasoline plus what are known as "cycle oils." The latter have to go through a desulphurising process before they can ba turned into diesel.

The commercial diesel market will grow, so the oil companies hope, as a result of increased industrial activity during the next few years. In Britain it will probably increase faster as smaller vans are powered with diesel instead of petrol engines.

But nobody is expecting a rapid rise in the retail diesel market where the private motorist is the customer. The main reason is the cost of cars—a diesel saloon costs up to 10 per cent more than a petrol engined car.

Here too, the Continent leads Britain. In the UK less than 5 per cent of private cars are diesel powered, whereas in Garmany the proportion is estimated to be nearer 10 per cent.

Sue Cameron
Chemicals Correspondent

COMPANY PROFILES

Cummins' backbone is heavy trucks

CUMMINS is one of the largest independent prodncara of diesel engines in the world. Its strength is in engines for heavy duty trucks, where its penetration of the U.S. market bas been as higb as 50 per cent. But Cummins is also a major supplier of industrial engines for cranes, excavators, mining equipment, etc. which require larger engines, and also engines for power generation and marine applications.

The company is currently at a particularly interesting stage because it is on the point of extending its engine range towards the lighter end of medium size diesels. The two projects in question concern the 10 litre engine, with a borsepower range of 230 to 290, which has been developed solely hy Cummins; and a new range of 50 to 250 hp engines which are under joint development with J. I. Case, the construction equipment manufacturer.

The existing Cummins range is hased on the NH series—the lower end of which is used hy European truck makers, including Leyland. Ford and ERF—V-903. Small Vee and K6 engines. These engines are used in automotive and industrial applications, and form the hackhone of Cummins. They are continually being modified to improve fuel efficiency. At the same time, Cummins is increasing the rating of its larger 12 and 16 cylinder industrial engines—KV12 and KV16 made at Daventry—and effectively increasing the upper end of its product range to 1,800.

The 10 litre, bowever, is the engine which is expected to pnt Cummins firmly into the full range category. Mr. Michael Howell, European business operations director, says: "It will mean that Cummins can get away from its reputation for heavy engines."

The 10-litre, or "blue engine" as it is called in Cummins, is scheduled for launch in the U.S. and Europe over the next couple of years. The major component lines are being put down at Cummins' Jamestown, NY, plant, but it is expected that the Shotts plant in Scotland will also assemble the engine.

The engine is critical for Cummins's attempts to break into the Continental market. Although the company has had some success in penatrating the industrial equipment market — supplying, for instance, Liebherr, O&K and Poclain — its efforts to break into the Continental truck market have so far heen frustrated by the predominance of "in-house" engines. The Ford Transcontinental truck, however, which is sold throughout Europe is powered exclusively by Cnmmins.

In the U.S., Cummins's concentration on the heavy duty truck market bas resulted in it losing out on tha growing dieselisation among medium duty trucks for which its product range is not currently suited. The new engine, originally designed mnre with Europe in mind, will provide a substantial boost to the range, in North America.

Engine manufacturers increasingly emphasise the buge cost of tooling up for new engine production. For the independents, the burden ideally needs to be shared with an OEM which agrees to take a proportion of the ontpnt. Cummins has accordingly been looking for partners in Europe on the 10 litre — originally it had Leyland in mind hecause of Cummins's strong links in the UK but Leyland'a truck volumes look increasingly like being too small for such an arrangement.

In the U.S., Cummins has linked with Case and with Ford on joint development studies. The Ford project for a car diesel engine, bowever, was abandoned earlier this year. The Case project is still very much alive, and plans for a new joint production facility are in progress.

Case will probably take half the output; but in selling the rest of the production in this new smaller range, Cummins will find itself in a completely different marketing set-up from that of its traditional markets.

Its progress will he watched with particular interest by European diesel makers, who are hoping to benefit from the growing demand for diesel power in the U.S. in tha lower horsepower categoriea.

In the second quarter of 1980, Cummins made a loss of $13.1m—a grapbic illustration of the pressures on all diesel engine makers in the current recession and on Cummins, which relies solely on engines, in particular. Cummins, however, points to the strengths of tha independent engine manufacturer: earnings are continually ploughed back into the development nf engines alone, unlike those manufacturers making engines as a component part nf their final prodnct, and who have to be constantly seeking ways of perfecting that product.

Given the pressures on the truck manufacturers in the U.S. to conform to tighter emissions standards, etc., Cummins argues that its specialism is unrivalled.

H.D.

Cummins' statement of earnings

	($000) 1979	1978
Net sales	1,770,834	1,520,748
Earnings hefore income taxes	82,751	120,807
Provisinn for income taxes	24,813	56,408
Net earnings	$57,938	$64,399

Cummins' penetration of US truck market

	Total U.S. diesel truck volumes	Cummins' penetration
1975	96,697	37.1%
1976	119,772	49.3%
1977	167,202	47.2%
1978	192,278	41.6%
1979	207,292	39.3%

GEC Diesels made up of six companies

GEC DIESELS is a loose-knit federation of independent engine-makers, each very much with its own identity, markets, and organisation. Annual sales of the whole group are in the region of £200m, which puts it in the top league, not far behind Perkins.

The group consists of six companies, four in the UK, one in France (Baudouin) and one in the U.S. (Alco). In engine size, the group spans a very wide range. Dorman, Kelvin and Baudouin are within the 20-1,000 hp bracket, and Ruston, Paxman and Alco from 500 to 5,000 hp. Each company bas its own specialist markets, and this has to some extent insulated the group as a whole from the worldwide recession in the industry.

The most adversely affected company is Dorman, which a few years ago was the largest in the group hut now contrihutes only around 15 per cent to its total sales. Dorman, which most nearly approaches volume production (ahout 3,000 units a year), produces small engines and is, therefore, particularly susceptible to the competitive forces affecting all companies in this area.

As much as 70-80 per cent of its output is sold to original equipment manufacturers in the UK. It, therefore, finds itself inextricably canght up in the downturn affecting sales of equipment, particularly in the industrial sector. The Stafford workforce bas heen cut hack by 30 per cent over the past couple of years, and Mr. David Powell, managing director of GEC Diesels, agrees that future strategy will depend on the state of the market for small diesels.

Difficult years

Ruston, whose main applications are marine propulsion and power generation, has pulled through after three difficult years. "We bave employed an aggressive sales policy in the UK and overseas, and this has yielded us a larger portion of a declining UK market and also some good overseas contracts," says Mr. Powell. Orders have been recelved from Nigeria, Indonesia, and particularly interesting orders from Saudi Arahia.

Although GEC policy is to allow the individual companies to pursue their own courses, there is an overall level of co-ordination in areas like marketing (this does not include selling, however, which is handled separately by each company), technical matters and, to some degree, manufacturing.

The most important example of inter-company co-operation is the new 6,500 hp engine which has been developed at Ruston and will shortly he going into the UK factory and also into Alco in the U.S. It will enahle Alco to keep up with the trend towards larger diesels in certain applications, which could be significant for exports as well as U.S. sales. Alco is in a good position to henefit from the devaluation of the dollar aginst sterling; its price advantage over Ruston in the UK is of the order of 30-35 per cent over the past 15 months.

GEC bought Alco from White Motor three years ago; the company has obvious product affiliations with Ruston, and it gave GEC the opportunity to have a crack at the difficult U.S. market. Mr. Powell helieves that local manufacture is vital in the U.S., but also that GEC bas been ahle to give a considerahle hoost to Alco.

The American exercise has heen rewarding enough to precipitate prompt expansion of Alco—the company's order book is currently very good—and GEC is currently looking at new sites.

Paxman, based in Colchester, England, is GEC's other producer of large diesels. The two major markets are defence equipment in tha UK and overseas—fast Navy patrol craft, minesweepers, etc.—and rail traction. The outlook for the latter is cyclical. British Rail'a order for 250 engines for the High Speed Train, which bas stretched over 4½ years, terminates this year. The company bas received a small order from Australia, but the prospects for diesel-powered railways are not good.

Kelvin, a small company specialising in engines for fishing boats and other small craft, bas bad a difficult time. But a hig order from Burma recently has secured at least one year's work for the company.

GEC diesel companies have a sound reputation for good specialist heavy-duty engines—the true long-life diesel. The problems in British industry, compounded by the strength of sterling, make the group's overseas purchases all the more significant.

The Baudouin acquisition, however, bas not led to a big increase in Continental sales, and GEC must be considering whether it needs to make new moves in order to become a greater international force in diesels.

H.D.

Oil price rises aid Japan's industry

OIL PRICE rises and the consequent demand for more fuel efficient engines has propelled the Japanese diesel engine industry in recent years. Car mannfacturers are using more diesel engines while shipbuilders are turning to medium-speed diesels which are superior in fuel economy.

The Japanese diesel engina industry got its start with licences from major foreign companies. For instance, Perkins Engines, part of the Massey-Ferguson group, had a licensing arrangement with Toyo Kogyo Co of Hiroshima, manufacturers of Mazda cars.

Mr. Thomas Firbank, of Perkins Engines in the Far East says the company bad a licensing arrangement with Toyo Kogyo from 1965 to 1975. Since then, there bas been technical collaboration.

Perkins and Toyn Kogyo are working on joint development of new engines. In fact, Toyo Kogyo makes some of Perkins's engines for worldwide sales. Perkins is also selling marine engines through Yanmar Diesel Engine Co.

Cummins of Columbus, Indiana, bas a long association with Japan. In addition, Detroit Diesel, suhsidiary of General Motors, Caterpiller, and Volvo of Sweden are represented.

In the marine sector, Ishikawajima-Harima Heavy Industries, Nippon Kokan KK and Fuji Diesel Co. build Pielstick engines under licence from Societe d'Etudes de Machines Thermiques (SEMT) of France. Mitsubishi Heavy Industries and Kawasaki Heavy Industries have a licensing agreement with Maschinefabrik Augsburg-Nnernherg (MAN) of West Germany.

Hitachi Zosen (Shipbuilding) and Sumitomo Heavy Industries bave a licensing agreement with Sulzer of Switzerland. Mitsui Engineering and Shiphuilding and Hitachi manufacture and market B. and W. engines under licence from Burmeister and Wain of Denmark.

Generally, diesel engines made in Japan can be divided into five types: automotive, industrial (which includes generators and air compressors), construction, agriculture, and marine.

The automotive sector is a captive market in which most manufacturers huild their own engines.

The non-captive market includes construction and agriculture. Komatsu, the big manufacturer nf construction machinery and industrial vehicles, makes engines under licence from Cummins but also manufactures its own engines.

Cummins also imports larger diesel engines. Its range runs from 150 hp to 1,600 bp whila the Japanese range is between 70 bp and 400 hp for the automotive market.

Trying to get any authoritative figure on prodnction of diesel engines is virtually impossible. Each sector keeps its own records and often these overlap. For instance, diesel engines are classified as marine even if they are only used for winches since they are mounted on hoard ship. Likewise, automotive engines can also he classified as construction or agricultural, depending on their use.

Only figures

The Japan Automobile Mannfacturers Association was the only group to provide figures for its sector. JAMA said that in 1978, 65,011 diesel car engines were produced. The total was 75,514 in 1979.

Ministry of International Trade and Industry figures for production of general purpose dieael engines were 591,543 in 1978 and 613,747 in 1979. Production of marine engines in 1978 was 209,836 and in 1979 174,224.

Komatsu can produce 40,000 engines a year, but is only working at 70 to 80 per cent capacity. Of this, 90 per cent goes towards its own construction machinery while the remaining production goes to other companies.

Kawasaki HI, Toyo Umpanki (TCM), Kobe Steel and Hitachi Construction are also major users of diesel engines. In high speed diesels, the major share nf the domestic market is held by Yanmar, Mitsubishi Daiga, Isuzu Motor Co., Nissan Motor Co. and Hino Motors.

Isuzu supplies some diesels to General Motors, which holds a 34 per cent interest in the Japanese company. Recently GM asked four Japanese manufacturers to supply 100,000 diesel engines ovar four years beginning in 1982. All refused since they were prodncing at full capacity for their own needs.

In the marine sector, medium-speed diesels are playing a major role because of soaring bunker oil prices. These medium-speed engines, which are superior to low-speed engines in fuel aconomy, also taka up less space in ships and are considered especially suitable for car carriers, ferries and roll-on/roll-off ships in which engine room height is limited. These engines are installed in medium-sized tankers of the 60,000 dwt to 80,000 dwt class.

John Fuji

JAPANESE DIESEL ENGINE EXPORTS

	1978	1979
North America	13,805	17,207
Western Europe	2,709	4,032
East Asia	10,318	16,933
Southeast Asia	150,194	121,736
Middle East	10,387	16,198
Tntal	203,994	195,401

Source: MITI.

JAPANESE PRODUCTION OF DIESEL ENGINES

	1978	1979	1980 (Jan.-June)
Standard trucks	355,385	396,367	203,800
Small trucks	255,302	322,392	187,051
Large buses	14,632	15,550	8,494
Small buses	13,989	15,941	11,031

Source: JAMA.

Examples of Italian success

THE TWO leading Italian diesel manufacturers, Ruggerini and Lombardini, are both sufficiently successful, and both have too much in common for it to be merely the product of coincidence. In fact, in their aimilar ways, both represant much of what is most flourisbing and dynamic in the national economy.

Both companies are around 60 years old. The first Ruggerini engine (a four borsepower aingle cylinder model for agricultural use) was produced in 1919. Three years later Signor Adelmo Lombardini founded his own family firm which today has grown into Lombardini Fabbrica Italiana Motori.

Both conceros are hased at Reggio Emilia, a medium-sized town about 40 miles to the north of Bologna, and ooe has become a good example of the current hoom enjoyed by Emilia Romagna, fast turning into one of the wealthiest industrial regions of Italy. The boom is founded on hard work and on small and medium-sized companies—today more than ever the linch-pin nf the country's prosperity. Lombardini and Ruggerini are perfect specimens.

The bigger of the two by a considerahle margin is Lombardini. In 1978, the last year for which figures are svailahle, it reported aales of L64.7bn (£32m) up from L54.6bn the previous year.

Ruggerini only expects in 1980 to top L20bn (£10m) turnover—but like Lombardini it has huilt np, from a small base by international standards, a thriving foreign husiness. Its sales and service network now operate in 84 overseas countries, while Rnggerini motors are today manufactured under licence in places as far afield as Spain, Greece and Brazil. Lombardini for its part has five foreign licensee producers and a sales and after sales natwork extending to 100 foreign countries. In some cases this involves wholly-owned commarcial subsidiaries.

Both companies in their concentration on smaller engines have heen pacemakers in the process of change which has turned the diesel engine from something unwieldy and slow into a flexible and highly compact unit. In the case of Ruggerini, the power of tha 40 different engine models it produces ranges from 8 hp up to 45 bp. They include industrial air-cooled and water-cooled motors, diesel-powered pumps, as well as the marine diesels (again both air- and water-cooled) for which Ruggerini is perhaps best known.

Today Ruggerini, like Lombardini, is concentrating its efforts in two main areas: to improve the environmental acceptability of its engines, by rednciug hoth noise levels and pollution, and to cut down their fuel consumption.

In Italy, diesel engines already draw considerahle advantage from the cost of their fuel (less than balf that of ordinary petrol). But industrial and civil heating systams offer tempting areas where progress on energy saving can most probahly produce major dividends in terms of sales. Indeed the small diesel sector is one which looks set to weather with comparatively little trouble the feared recession which conld well hit prospects for bigger engines.

Different scale

Lombardini, whose headqoarters is jnst a few miles from that of Ruggerini, is on an altogether different scale. Whereas Ruggerini employs just 1,000 people in all—of whom 600 are outside specialist "subcontractors," Lombardini's workforce in Reggio alone totals 1,600, while snother 1,000 are employed in associate companies including the Spanish offshoot Hispanomotor.

Total annual production is running at around 220,000 diesel units plus a further 150,000 petrol-powered engines. The range covers motors from one to four cylinders, generating a power of between four and 70 hp. The company likes to boast its versatility—for example, standard accessories nffered mean that up to 5,000 configurations of basic models are availabla. This enables customers to almost tailor a particular engine to their own precise requirements. At the same time Lombardini itself is directly engaged "upstream" in the production cycle of its engines.

The two Italian companies, in keeping with their counterparts in other industrial fields in Italy, are blessed by two factors: their comparatively small size, allowing flexibility and good labour relations, and their degree of specialisation. This last has belped build up the customer loyalty which might well be dissipated if they were to expand their range into bigger engines.

Rupert Cornwell

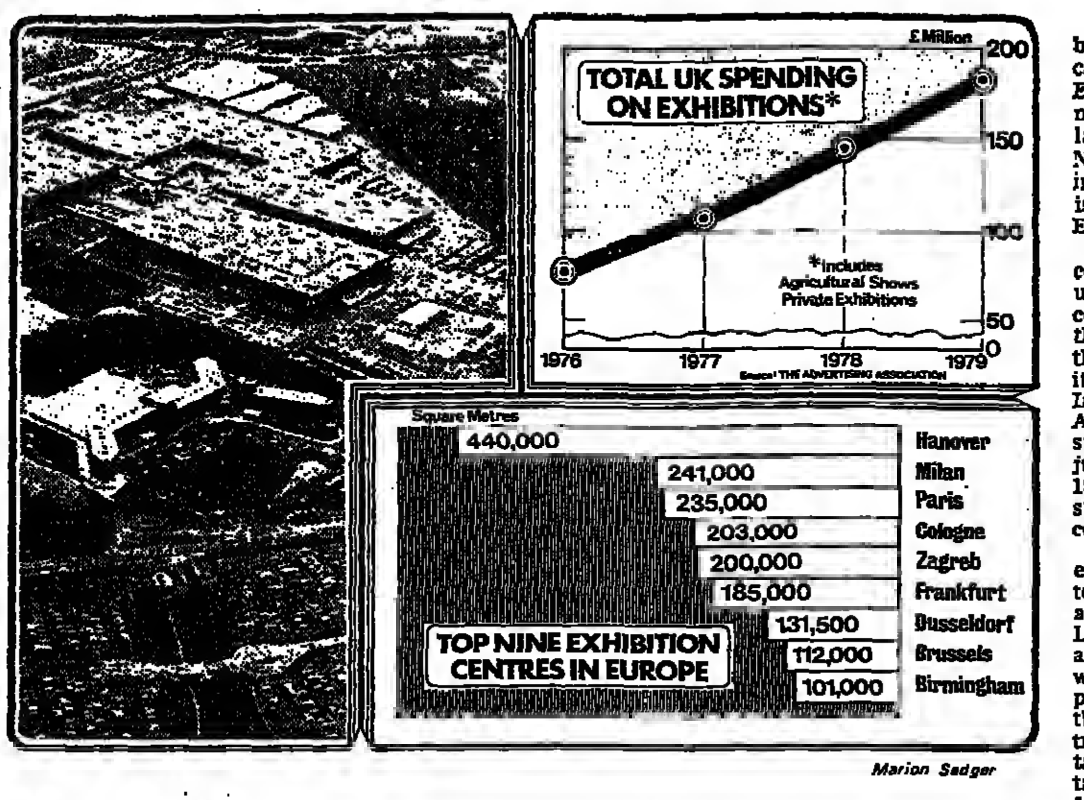
EUROPEAN SMALL DIESEL PRODUCTION (1978)

		Units
Italy	Lombardini	140,000
	Ruggerini	40,000
UK	Lister	80,000
	Petters	50,000
Germany	Hatz	55,000
	Farymann	15,000
Others		200,000
Total		600,000

Source: Eurofinance

THE EXHIBITIONS BUSINESS

Britain strives to keep in the big time



Marion Sadger

BIRMINGHAM is still smarting from the news that its National Exhibitinn Centre has lost a major textile machinery exhibition to Milan.

It is not just a question of injured local pride. The 1983 International Textile Machinery Association exhibition would have earned the region around £100m and underlined the fact that Britain now has an exhibitinn centre able to compete with its rivals elsewhere in Europe.

The competition is fierce. Britain may enjoy a place on the international circuit for the huge, peripatetic fairs which move from centre to centre every two, three or four years. But keeping up in a rapidly growing business is hard work and some British exhibition companies believe that Britain is having to compete under some disadvantage.

Modern fairs come in infinte variety, from well-publicised occasions directed both at consumer and trade like the Motor Show and the Ideal Home Exhibitinn in this country to highly specialised ones like last week's millinery fair in Wiesbaden and forthcoming events like the hydrometeorological technology exhibition in Moscow.

And the costs to the companies come in infinite variety too. The British Overseas Trade Board has, for example, rented space at the Jeddah Electricity Exhibition in February and March 1981. It will charge British companies £75 per square metre and provide a basic stand. But after that the companies have to meet extra construction costs, travel, freight accommodation and so on.

Exhibiting heavy electrical goods in Hanover last year cost Hawker Siddeley a basic £35,000, but the true costs were higher. In the first place there was a BOTB subsidy. Then there there were all the service costs, not to speak of the time, hotel expenses and entertainment carried ont by 14 salesmen.

It is precisely the spending associated with moving people and their goods from centre to centre which makes fairs and exhibitions such big business.

Hence the anger in Birmingham ten days ago when it finally became clear that the National Exhibition Centre had lost the textile exhibition to Milan.

Thia particular exhibitinn is exceptional in terms of its size. The last tima it was held, in Hanover, there were 150,000 visitors, of whom about 75 per cent came from nverseas. But even at smaller international occasions held in Birmingham, the everage internatinnal attendance is 20 per cent, and it rose to 34 per cent for a recent international plastic fair.

So the stakes are high, and explain the rivalry on the European fairs circuit. Specific figures are difficult, but in 1978, AMK Berlin, the owner of exhibition halls and an organiser of fairs, commissioned a survey which showed that the average trade fairs visitor to Berlin spent DM 179 (£46.50) a day.

The biggest spenders were visitors to the International Slot Machine Exhibition: no doubt giving practical demonstrations. They spent an average DM 299 but visitors to an antiques fair spent only DM 134 a day.

In 1976-77, the University of Aston calculated that £21.8m was spent by visitors and exhibitors at the National Exhibition Centre (NEC) in Birmingham. The amount has grown sharply since, as the NEC has increased its business and as inflation has risen.

Since opening in 1976 at a cost of £40m, the NEC has taken the lion's share of the major UK trade fairs but compared with other European centres it has some disadvantages. In design, ease of access and compactness, it is first in Europe, claims Mr. Terry Golding, the chief executive. In size it is ninth, after Hanover, Milan, Paris, Cologne, Zagreb, Frankfurt, Dusseldorf and Brussels. The NEC has 101 square metres of space, Hanover has 440,000 square metres.

But because the NEC is new, it has heavier financial charges than the main continental centres. "We are looking to service a debt of £40m at threequarters of average interest rates. We are trying to cover costs end interest charges. We are trying not tn lose money. Up to now it has not been possible to cover interest charges. But this year for the first time we have generated enough business to cover interest charges," Mr. Golding said.

But many nf the continental centres have by now long since amortised their costs. At the same time they are often directly nwned by local goveroments which are prepared to see a loss made nn a particular exhibition because it will generate revenue for the region as a whole.

The existence of local taxes at many of the continental centres means that every meal bought by a visitor, every night spent in e hotel brings revenue directly to the local government. But the UK system of local finance, based nn rates and direct central government support, means that Birmingham City Council gains very little direct revenue from any particular show held at the NEC.

This contrast, applied to any argument about where a trade fair might be held, could be decisive. It is said, that in the case of the International Textile Machinery Association Exhibition, Milan was able to offer rates as lo was SwFr 260 (£66.15) e aquare metre compared with the pared down NEC rate nf SwFr 300.

NEC, then, is competing with other centres for the travelling international fair business nn the basis of different criteria. But, in additinn to that, it is also subject to higher infletinn rates than many of its European rivals.

The very existence of NEC brought business to the UK because Britain's main halls like Earls Court and Olympia were not big enough to cope with large-scale international fairs. NEC claims that with 35 major industrial exhibitions a year, it is twice as busy as its busiest European competitor, Cologne.

But Mr. Lyons warns—and his company is the NEC's biggest user — that UK inflation is a compounding disadvantage for the NEC and in the longer term there could be a downturn in its business. According to the Incorporated Society of British Advertisers (ISBA), exhibition space rental costs in the UK jumped 286 per cent between 1970 and 1979, and stand constructinn costs leapt 409 per cent.

These immediate costs, however, are a small portion of the total which has to be faced by any exhibitor at a fair. Mr. Lyons calculetes that, roughly, an exhibitor next year at NEC will probably have to pay £50 per square metre for space, but that actual costs, by the tima travel, accommodation, entertainment and so nn have been taken into account, will rise to four times that.

NEC's performance therefore is related to the general performance nf the economy. This is not to suggest, however, that simply because inflation is running at a high rate, the number nf exhibitions held in the UK will automatically decline. There are other and wider criteria for decisions on where exhibitions and fairs are held.

"You're not going to sell fish unless you cry fish," said one organiser. In other words, the siting of fairs is connected to the market which is being epproached. There is little point in trying to mount a gold mining machinery exhibition in Belgium because gold mining is carried on nutside Europe. But there is great point in holding a plastics fair in the UK because Britain not only consumes plastics but makes them as well.

Companies use the fairs to make and consolidate commercial contacts—they parade in the market place, but they do not expect to win orders straight from the display.

In Europe 80 per cent of fairs are now technical, for professional buyers. "Specialised information and market events geared to specific aectors and target groups efficiently respond to the needs of varied international and sectoral structures," notes AMK Berlin.

"Most exhibitions hold title to be internatinnal, bnt they spring out of the natinnal situation," said one fairs specialist. The idea is aimply to create e focus for a particular market, and tn that extent they are a test nf national economic vitality.

This in turn means that the organisation nf faira is mnre stable than tha arguments about the siting of the International Textile Machinery Association exhibition might suggest. The national events obviously do not move from couotry to conntry. Thoae that do move are run by international federatinns which travel round a well-established circuit of which the UK, because of the NEC, is now a part.

Whether these federations come to Britain depends, according to Mr. Colding, on "whether the trade itself perceives the need for a show in the UK—is the UK a prominent enongh manufacturer nr a prominent enough buyer?"

The difficulty is that the perceptions have to be worked ont long in advance: the dispute about the Interoational Textile Machinery Association is concerned with an event planned three years hence. Commitments to nrganise a fair, or to take part in it, therefore involve a high element of risk. The effects of the present recession may not be felt in the business for a year or twn.

But exhibitions took 8 per cent of the total advertising budget of British companies last year—within the UK. They spent £182m, more than ever before, although this figure shows little change in real terms from 1978. Exhibitions followad televisinn, poster and transport advertising, cinema and radio as the favoured means of promotion.

In addition, UK companies, ISBA calculated, apent a further £51m on exhibiting overseas, of which 47 per cent was spent directly on their own account and 53 per cent in joint ventures with the British Overseas Trade Board (BOTB) (Since 1977 companies have been exhibiting overseas more and more independently of the BOTB, a factor which the Covernment no donht took into consideration when it reduced the BOTB hudget last April.)

Because of the increasingly specialist nature of fairs and exhibitions, companies are mora sure of the public they are reaching than they would be with, say, cinema advertising.

This year the British fairs industry has been enjoying a boom in line with the cycle that has brought in a number of biennial and triennial exhibitions. Next year will probably be quieter, not only because the cycle moves down again, but because the recession is causing exhibitors to be more careful in their promotion expenditure.

"Looking to 1981," predicted one specialist, "there are some signs that exhibitors are watching their budgets. It's not that the bookings are low, but they may be buying less space and being less theatrical in their presentation."

Paul Cheeseright

Letters to the Editor

Our crumbling buildings

From Mr. William Allen

Sir,—Mr. Mason claims (September 10) that the incidence of faults in recently-constructed buildings could be avoided by what he calls "independent supervision" of structural work.

My firm has been consulted about many of these misfortunes and has also done independent supervision; and from our experience of both I do not see that the latter would reduce the former. The supervision which takes place now does not avert problems because it lacks independence, but for several quite different reasons.

First, errors of architectural and engineering design occur but supervisors would have to be more expert than the designers to see them and would have to be able to over-ride professional decisions to correct them, and design liability would then have to transfer to the new supervision.

Second, some innovative products and construction systems have displayed defects which have only been discoverable after a period in service.

Third, some makers of materials and products are less than frank in their trade literature about problems that can attand upon their use.

Fourth, some innovations have proved to have interactions too complex to be foreseeable. Condensation in dwellings was ona auch, a cumuletive consequence of aeveral individually commendable steps to reduce the waste of heat by cutting down ventilation. It reached levels where family moistura was not being removed at tha rate at which it was being made.

Finally, there are physicists and chemists developing new building materials without an adeqnate knowledge of field conditions in the industry, and their products get misused.

The list could ba extended, but perhaps I have made my point. Independent supervisinn would not correct such matters. The root problem is that building has changed from being a stable, habit-based industry using a limited ranga of familiar products to one which is knowladge-based, with an extent of knowledge now beyond the scope which any individual can encompass, but without clarity of division abont who should know what.

Better supervision is as desirable as several other possible improvements, but it is a knowledge problem, not one of its independence.

W. Allen.
Bickerdike Allen Partners,
16, New End, London, NW3.

Marriage and tax relief

From Mrs. Betty Frampton

Sir,—Certain points need to be raised about the letter (September 8) suggesting the abolition of the married woman's earned income allowance. While there is an anomaly whereby married couples who both work may claim more tax relief than other members of society, this anomaly can easily be eliminated by abolishing the married man's tax allowance in respect of his wife.

In the event of children being born, whichever parent gives up working to look after those children can then be paid a salary. The salary could be reduced as the children reach full-time edncation and further reduced to zero as the children become old enough to look after themselves.

It is in this way that the true equity which Dr. Staveley is so obviously seeking, can be achieved.

Betty Frampton.
Battlewell,
67, Greenhill,
Evesham, Worcs.

Working wives

From Mrs. H. James

Sir,—The tax advantages referred to by Dr. Staveley and Mr. Whittle could be achieved by a married couple if the husband stayed at home to look after the family and the wife took paid employment. One can only speculate on the reasons that this tax incentive has produced very few "reverse role" couples.

When considering tax reform account should be taken of the severe tax disadvantages of a married woman with family responsibilities taking up paid employment. Such a "working wife" frequently has to emplny other people to care for children, help in house, etc., but the associated costs including wages, tax, national insurance contributions, have to be met from her net salary. On grounds of equity, these expenses, necessarily incurred if sha is to continue to "work" should be allowable for tax.

Helen James.
57, Seaford Close,
Ruislip,
Middlesex.

Why women must work

From Dr. Rosalie Silverstone

Sir,—You have published two letters on the topic of married women and unemploymant (from Dr. E. S. Staveley and Mr. Thomas E. Whittle Sept. 12). Both make the point that the tax structure encouragaa women to work who would not otherwise do so and that this exacerbates unemployment.

Underlying this view are two assumptions. The first is that many women work only to earn untaxed income. There are few women fortunate enough to be in this position. Most work because they need the money for basic commodities such as rent, mortgages and electricity. It was recently shown that three times as many families would be living below the poverty level if the wives did not work.

The second assumption is that if married women stayed at home unemployed men would step into their jobs. This would not happen. Many women work in occupations where unemployed men do not have the necessary skills, such as secretarial work or nursing.

Moreover, much of the work of married women is done nn a part-time basis. Few men wish to do this kind of work and employers usually provide part-time jobs only because they cannot find full-time amployees.

There is no need to change the tax system in order to remove women from the labour market. Between 1971 and 1980 registered unemployment among men rose by 80 per cent whereas among women it more than qnadrupled.

(Dr.) Rosalie Silverstone.
The Fawcett Society,
25, Wilton Rood,
London, SW1

Reasons why they work

From Mrs. Jean Denton

Sir,—Following the correspondence in your columns abont the reasons we work, I await the suggestion that we should reduce public spending by cutting down educational opportunities available to girls.

I would suggest that wives who work for tax advantage are as elusive as the man nn tha Clapham Omnibus—much talked about and never met. After shopping carried out at 8.00 pm at night, washing done on sunny Sundays, children chauffered at 8.30 am before the nffice, baby-sitting paid at 1980 rates, I can assure yon we would pay the Inland Revenue if they could sell us time!

Jean Denton.
Studio Flat,
65, Redcliffe Road, SW10.

In the eye of the beholder

From Mr. A. L. Beord

Sir, — So the Office of Fair Trading is looking for more private sector companies to investigate and tha competition act gives no definition of what is considered to be an anti-competitive practice (September 12). No doubt, like beauty, this will be found to be in tha eye of the beholder.

Yet what is most seriously wrong in industry is not that it is uncompetitive, but that it is unprofitable. It is unprofitable because of the monopolies and anti-competitive practices of the trade unions and the nationalised industries. Astonishingly, the OFT does not investigate these. If it did, it would find a rich harvest and, off the back of industry, might giva us all a little longer to atruggle on before we finally collapse under ever-increasing Covernmant burdens.

A. L. Beard.
Woodfield, Sparken Hill,
Worksop, Notts.

The case for fish farming

From Mr. Roderick Parker

Sir, — Richard Mooney's description (September 11) of the problems of the European fishing industry would have been valid if he had used the word "current" rather than "basic."

Irrespective of stocks and access to them, it is tha prospect of negligible improvement in catching prodnctivity that in the long runs means prices of caught fish will never be competitive with its substitutes.

Instead of squabbling over the share-out of wild fish resources in an ultimately doomed rearguard action, there can be a future for fish prodnction in Europe, but a paradoxically brighter one the less money is poured into fishing.

The case for fish farming is getting stronger all the time and the sooner it is promoted from near neglect by national and EEC policy makers the better. It is interesting that at company level for Fisons, Unilever, Ranks and J. and P. Coats to name but a few, this has already happened.

Unless the EEC gets on with the development of fish farming, one day it will be farmed fish that are "flooding on to the European market" from our better organised competitors, like Norway where farmed salmon bava this year for the first time set the price for the salmon market as a whole.

Roderick Parker.
Bottelle Institute,
15, Hanover Square, W1

Nannies on the cheap

From Mrs. M. Sheppard.

Sir,—My daughter recently obtained her NNEB qualification and finds that a nursery nurse/nanny post entails the longest hours, most exacting work schedule and the lowest pay of any other trained job! For example, recent applications have shown that the time off may be "two evenings a week, plus one weekend off in four" and for this the pay offered can be as little as £18 per week (plus keep, of course). Several advertisers expect a housekeeper as well as a nanny, and one must expect to be a driver as well. 18-year-olds without experience are not generally acceptable.

Perhaps in a few months time when unemployment figures are even higher, an NNEB will be expected to pay the employer for an opportunity to slave? No wonder they all want jobs with Arabs!

Mary Sheppard.
4, Gorden Place,
Sudbury, Suffolk.

Burning question

From Mr. Jeremy Oatas

Sir,—In view of the Covernments inability to control public money supply borrowing may I suggeat that tha burden be placed on the private section with the slogan "Reduce the money supply — burn a £5 note."

Jeremy Oates
14-16 Monument Street, EC3

Telephone network

From the Managing Director of British Telecom

Sir,—I would like to correct any misunderstanding that may arise from the article on modernising the telephone network that you published on September 12.

Of course the benefit of greater efficiency and productivity of System X will be passed on to the consumer. When the new digital trunk network is fully in place, we expect that the annual charges of owning and operating that system will be cut to half the level of today's analogue network — including the cost of capital; this will be seen by the customer in reduced real cost of telephone services. However in order to achieve these benefits in future, we must invest money now in the new equipment, and under Government cash limit rules, we are required to find the vast majority of this money from income.

We have accepted an objective set by Government to reduce the real cost of our telecommunication services by an average of 5 per cent each year; so far we are on track for achieving that target.

P. F. Benton.
2-12 Gresham Street, EC2.

Today's Events

GENERAL

UK Financial Times conference on developing the annual company report concludes, Savoy Hotel, London.

British Pharmaceutical conference opens, Newcastle upon Tyne, (to September 19).

Amalgamated Union of Engineering Workers conference concludes, Llandudno.

London Health Service white collar members of National and Local Government Officers Association discuss possible strike action over pay claim.

Ceneral and Municipal Workers Union conference on tha rubber industry, Cardiff.

Dr. David Owen, Opposition energy spokesman, speaks at Whitehaven.

Miss Joan Lestor speaks at Labour Party meeting, Twickenham.

Professor Naota Sasaki, professor of economics and industrial administration, Sopha University, Japan, is among speakers at world convention on quality circles, Waldorf Hotel, London (to September 18).

Mr. Phan Wannamethee, Thai Ambassador, speaks on trade opportunities in Thailand, Birmingham Chamber of Commerce.

Brewing Technology conference opens, Harrogate (to September 18).

Mr. Andrew Lloyd Webber announces new West End musical venture.

Memorial service for Mr. Kenneth Tynan at St. Paul's Church, Covent Carden, noon.

LEGO building blocks construction competition at tha Building Centre, Store Street, WC1, to design an entranca to the City.

Overseas: Dutch Budget for 1981 presented.

Princess Alexandra visits Burma (to September 18).

EEC Foreign Ministers conclude meeting in Brussels.

European Parliament session continues, Strasbourg, (to September 19).

International Tunnelling Industry Exhibition and Conference opens, Basle, (to September 20).

COMPANY MEETINGS

Amalgamated Distilled Products, Caledonian Hotel, Princes Street, Edinburgh, 12. Belhaven Brewery, Morleys Nite Spot, 100 Edmiston Drive, Glasgow, 11.30. British Land, Mayfair Hotel, Berkeley Street, W, 12. Bromsgrove Casting and Machine, Perry Hall Hotel, Bromsgrove, Worcestershire, 12. G. H. Downing, North Stafford Hotel, Stoke-on-Trent, 12.15. Glove Investment Trust, Electra House, Temple Place, Victoria Embankment, WC, 12.30. Jermyn Investment Trust, 6/11 Agar Street, WC, 12. Rediffusion Television, Stratton House, Piccadilly, W, 10.30.

COMPANY RESULTS

Final dividends: London Merchant Securities. Ceorge M. Scholes, Sirdar. Interim dividends: Barrow Hepburn Group. Blockleys. Bodycote International. Executive Clothes. Home Charm. Inveresk Group. Bernard Matthews. Ofrex Group. Wadkin. Watts, Blake, Hearne. Willis Faber. Interim figures: Martin-Black.

LUNCHTIME MUSIC, London

Recital by John Franca (cello) and Eric Stevens (piano), St. Peter-upon-Cornhill, Cornhill, EC3, 12.30 pm.

Richards & Wallington lower and defers interim

WITH interest charges soaring by £700,000 to £2.34m, pre-tax profits of Richards and Wallington, plant hirer, fell from £1.18m to £439,000 in the six months to June 30, 1980. The board blames the 12-week steel strike at the beginning of the year and the economic recession for this setback.

But, it says, to counteract this, severe reductions in the group's operating costs have been made with several hundred redundancies and various depot closures.

In spite of these difficulties, turnover for the six-month period rose from £18.16m to £21.1m and operating profit was little changed at £2.62m (£2.73m). In addition to the high interest charges, exchange losses took £241,000 and this has resulted in the group writing down the value of its overseas assets as an extraordinary item.

The 1 per cent reduction in MLR means a saving of £250,000 per annum.

Mr. W. R. Richards, the chairman, says a decision on the payment of the interim dividend will not be made until later in the year when there will be a better indication of results for the full 12 months.

He says improvements are expected in the second half and it is hoped that the cumulative dividends that will be paid for the year as a whole will be maintained at last year's level of 5.23p net, of which 1.85p was paid as an interim.

Tax this time was £22,000 compared with £120,000, and profits retained amounted to £149,000 (£599,000).

The chairman says the trading performance of group's associate DIY company, Unit Sales (DIY), is excellent and against reported market trends —its performance this year being comparable with last year on a store for store basis.

The performance of R. and W. International Exhibition Services and Record Tower Cranes shows considerable advances on last year and these trends will continue.

● comment

It may have become somewhat superfluous to compare industrial asset backing with equity capitalisations but, unchanged at 45p, yesterday Richards and Wallington is rated by the market at £6.3m against end-December book worth £20.6m and a hire fleet, which at £36m, must substantially discount replacement costs. That could explain the share price resilience in the face of an overwhelmingly poor first half. The historic yield of 16.6 per cent may have something to do with it too since, while the interim is on ice, the group remains reasonably sanguine about repeating last year's total in full. That rests heavily on a recovery from the effects of the steel strike of the first half and a reduction of hefty end-June borrowings of £27m. The target is to push debt below £20m within 12 months and to cut the fleet value to about £25m. That, in turn, assumes that disposals will command a premium to book values although the group is now saying that the very severity of the recession has finally cracked the defensive shell of the hire sector as a whole. Its medium-term answer has been to diversify into cash generating business—DIY and business exhibitions being the foremost examples—to the point when, in about two years, assets employed outside the core activity amount to about 50 per cent of the total. Again, the group is confident that it has the management capacity to develop entirely new operations but the planned contraction of its hire network is permanent and begs the question as to how it will respond when demand surges in the event of a reflationary economic boost. The impending results from G. W. Sparrow and Hewden-Stuart may provide a better sounding of the depth of the industry's problems or, conversely, whether Richards and Wallington's indifferent track record has taken all the recessionary knocks right on the chin.

HIGHLIGHTS

The feud between the Rothschild cousins, Jacob and Evelyn is now leading to a formal severing of financial links between **N. M. Rothschild and Rothschild Investment Trust.** Lex looks at the implications. **Simon Engineering** has produced a 5 per cent rise in half time profits to £7.6m but its UK order book is deteriorating. Lex analyses the annual report of **Broken Hill Proprietary**, Australia's largest company, and also looks at yesterday's economic statistics and the slight shakeout in the sterling markets. On the inside pages **Richards and Wallington's** figures make depressing reading with a fall in profits from £1.2m to £439,000. Lower figures were also reported by **Low and Bonar** and **Pittard** but **Link House** continues to push ahead, while **Travis and Arnold** is up though indicates a setback for the full year.

RECEIVER FOR S. C. WARD

Mr. Martin Page, a Norwich partner in chartered accountants Peat, Marwick, Mitchell and Co., has been appointed receiver and manager of general and marine engineering specialist, S. C. Ward (Engineers), of Meteor Close, Airport Industrial Estate, Norwich.

Closure is due to lack of orders, and 16 employees have been made redundant.

Chambers and Fargus improves

Taxable revenue of Chambers and Fargus went ahead from £213,297 to £355,834 for the year to June 28, 1980. Turnover of the seed crusher and edible oil refiner rose to £11.42m, compared with £9.25m last year. The tax charge was £186,358, against £110,048.

Stated earnings per 5p share were better at 4.74p (2.89p). The total dividend for the period is raised to 1.5p net (0.75p) with a final of 1.25p. At mid-term, pre-tax profits were £83,991 (£100,785).

Pifco looks ahead with 'great caution'

The directors of Pifco Holdings, maker and distributor of electrical appliances, say the current year has started reasonably satisfactorily, but the group is facing an uncertain level of trading activity in the year ahead.

It is well diversified in products and continues to have a healthy financial position, but because of the depressed state of the economy, the Board views the outlook with great caution.

The group will continue to invest in new product development which the Board believes is essential for the future growth of the company. This programme is geared to provide the consumer with products of good design and performance.

As known, pre-tax profits for the year to April 30, 1980, rose from £1.62m to £2.01m.

Link House improves and pays 20% above forecast

TAXABLE PROFITS of Link House Publications rose in the year to June 30, 1980, from £3.03m to £4.2m — an increase of 38.7 per cent.

The directors are paying a final dividend of 5.6p, which makes a total for the year of 8.4p net, 20 per cent more than they indicated in the offer for sale document.

The company, which was made public in October, 1979, publishes advertising periodicals — including Exchange and Mart — consumer, trade and professional magazines and annuals, and books.

Turnover for the year advanced from £18.18m to £21.8m and investment income increased to £537,000 (£269,000). After exceptional expenditure of £6,000 (£154,000) and tax of £2.22m (£1.61m) the net surplus rose from £1.42m to £1.99m. Stated earnings per 20p share are up from 11.81p to 16.55p.

There was an extraordinary debit of £302,000 (£35,000), the cost of obtaining a listing on the Stock Exchange, leaving attributable profits of £1.68m (£1.38m).

The directors say that during the year industrial disputes cost around £200,000 in terms of profit. And the book division, they say, slipped into the red hit by a bad debt provision. Although this loss was only marginal, it has continued into the current year.

Overall trading in the first two months of the current year was at a satisfactory level. But chief executive Mr. Ronald Wenn warns that the company is going to find it difficult to maintain growth in terms of profitability.

But with strong cash reserves, the group is in a position to take advantage of any investment opportunities which could arise.

Advertising revenue of the Exchange and Mark publishing division is continuing to grow even though circulation figures are currently running some 5 per cent down on last year.

Referring to the 1979-80 results, the directors say this division had another successful year. The "all-advertising" periodicals tend to be less susceptible to recessionary influences and, with one exception, all titles experienced significant volume increases during the year. Exchange and Mart enjoyed a year of continuing growth.

The less buoyant advertising market referred to at the time of the interim results in March developed and created difficulties for the magazine division in the last quarter of the year. Performance over the whole year, although short of expectations, was ahead of the previous year.

In common with book publishing in general the Blandford Books division suffered.

The communications division is investing in new communications systems, not only as a protective measure, but also as a means of exploiting future opportunities. Present commitment involves the establishment of a viewdata agency service, specialised marketing programme and two new regional viewdata programme companies.

As announced in May, the division is also participating in West Country television, the consortium applying for the independent franchise currently held by Westward Television.

● comment

The profits from Exchange and Mart still dwarf the other operations of Link House and, even though the group has not broken down divisional results, it is clear that this publication has carried the other operations through a difficult period. E & M lost around £200,000 in profits through the NGA dispute but, by comparison, book publishing made a small loss last year while the non-advertising magazines were more susceptible to the general decline in advertising volume. E & M is virtually recession-proof but its steady growth hardly justifies the historic p/e of 11.3 on yesterday's record price of 193p. Control of the shares is vested firmly with directors and their families, so a bid would have to be agreed, and the prospects for the group's communications venture are not yet assured. The balance sheet is sound, with around £3m of quick assets in the till, but the capitalisation of over £23m assumes a great deal of good will in the titles. The yield is 6.4 per cent on a dividend cover of 1.7 times.

Low & Bonar profits clipped by £0.5m midway as demand falls

A DROP of £519,000 to £3.94m in pre-tax profits is reported by the Low and Bonard Group for the six months to May 31, 1980. Although sales increased by 5 per cent from £74.5m to £78.3m, there was a "sudden and severe reduction in demand" in the second quarter. This, says the board, was aggravated by a strong pound, costing £154,000 on conversion of overseas earnings.

Nairn Travel, acquired in May, had no significant effect on the results, but the board expects "a material contribution to profits during the remainder of the current year."

There is a £1.88m (£2.08m) tax charge and, after minorities of £363,000 (£402,000), attributable profits were £1.7m compared with £1.98m last time.

The interim dividend is unchanged at 5p, on capital increased following the Nairn Travel acquisition, but last year's figure, included a special payment of 0.3655p. This year's total was 14.5p from pre-tax profits of £9.02m. Dividends for the first half absorb £686,000 (£560,000).

UK packaging operations experienced difficult conditions and profits fell from £891,000 to £331,000. In the engineering division, UK companies producing goods for specialised applications maintained a satisfactory level of activity in an industrial sector otherwise hard hit by the current recession.

The exception was Hugh Smith, the heavy machine tool manufacturer, where the declining world demand for capital items had a marked effect.

The group's overseas engineering companies had mixed fortunes, but good results were achieved by companies recently acquired in Kenya and Australia.

Textile profits increased by 21 per cent to £2.17m. The group's industrial textile companies had a difficult first half and their results reflect the seriously depressed markets in which they operate. Active steps have been taken, says the board, to combat the worst effects of the continuing recession in the UK textile industry and major re-organisation of four companies in Scotland was put in hand at the end of August.

In the first half the group managed to contain its level of borrowings to such an extent that despite the high interest rates, the total charge was not substantially greater than for 1979.

It was announced yesterday that the interest of Mr. Ian C. Low has been reduced to 733,435 shares (5.35 per cent).

● comment

The three sectors in which Low and Bonar is involved—packaging, engineering and textiles—read like a recipe for disaster. The fact that profits are down by only 11.6 per cent is attributable in large part to its extensive foreign interests, with Africa in particular doing well—profit margins there are more than four times those in the UK and EEC. Yet the group's strategy of generating more income close to home retains its logic. The ACT problem has now been overcome but repatriation of African earnings can be difficult and there is an inherent political risk. Some UK operations are in troubled waters with Hugh Smith, for example, remaining in loss, but Flotex is performing very well and the Nairn Travel acquisition could contribute up to £0.5m in the second half. Even so, profits for the year are unlikely to be much over £8¼m, suggesting a multiple of 6.9 at 178p. The yield of 12 per cent on a maintained final is supported by a comfortable dividend cover.

Dixons Photo sees continuing progress

An uninterrupted and growing demand for the products it sells is forecast by Dixons Photographic. Mr. Stanley Kalms, the chairman, in his annual report says he does not doubt the company's ability to ensure a profitable, sound and growing business.

He states that the company has never been stronger and its determination to achieve sustained growth is firmer than ever "but the company must recognise the present vicissitudes of the economy."

Total assets employed in the group now exceed £100m and net current assets increased during last year by 20 per cent to £38m.

In addition, there is an estimated surplus of £9m over book value on property valuation.

The sub-contracting of the Dixons Charge Card business will provide added liquidity to the extent of about £8m.

Mr. Kalms says the group has an extensive programme of positive expansion, and research into and testing of different concepts of marketing and product development.

Pre-tax profits for the year ended April 26, 1980 improved from £10.72m to £10.92m, on turnover of £219.1m (£207.6m)—as already known.

In 1979-80, there was a compensation payment of £13,000 for loss of office to a former director. On January 1, Mr. P. Kalms resigned from the board.

Meeting, The Institute of Directors, SW, October 9, noon.

MOLINS IN MILTON KEYNES

Prospective demand for the handling and packing systems of Molins is expected to out-strip the available manufacturing facilities at its Deptford premises, so a major restructuring programme has been initiated.

A separate division has been formed for the research, development and manufacture of the group's cigarette handling and systems equipment. It will be based in Milton Keynes.

SPAIN

Sept. 12	%	+ or −
Banco Bilbao	237	
Banco Central	270	
Banco Exterior	212	
Banco Hispano	232	−2
Banco Ind. Cat.	120	
Banco Madrid	141	
Banco Santander	270	
Banco Urquijo	142	−1
Banco Vizcaya	248	
Banco Zaragoza	226	
Dragdos	112	+1
Espanola Zinc	71	+1
Fecsa	64	+0.50
Gal. Preciados	35	+2
Hidrola	69	
Iberduero	66.50	
Petroleos	120	
Petroliber	80	
Sogelisa	107	
Telefonica	63.20	−0.30
Union Elect.	70	+1

DIVIDENDS ANNOUNCED

		Current payment	Date of payment	Corresponding div.	Total for year	Total last year
Bifurcated Eng.	int.	1.15	Oct. 27	1.15	—	3.5
Chambers & Fargus		1.25	—	0.5	1.5	0.75
Horace Cory	int.	0.6	Oct. 30	0.6	—	1.3
Federated Land		1.1	Nov. 15	1	—	3.15
James Fisher	int.	1	Nov. 6	0.75*	—	1.75*
Jentique		Nil	—	1.45	1.03	2.48
Leadenhall Sterling	int.	1.38	Jan. 2	1.25	—	3.13
Link House		5.6§	—	—	8.4§	—
Pittard	int.	1.38	Jan. 1	1.38	—	4
Low & Bonard	int†	5	Nov. 24	5‡	—	14.5
Simon Engineering	int.	4	Dec. 31	4	—	11.33
Travis & Arnold	int.	0.64	Nov. 3	0.58*	—	3.58*

Dividends shown pence per share net except where otherwise stated.
* Equivalent after allowing for scrip issue. † On capital increased by rights and/or acquisition issues. ‡ Includes special payment of 0.3655p. § No comparison as company made public October 1979.

Half-way rise for Travis and Arnold

Pre-tax profits of Travis and Arnold, builders' and plumbers' merchant and timber importer, rose in the first half of 1980 from £2.41m to £3.12m on sales 10 per cent higher at £51.26m, compared with £46.54m.

However, the directors warn that most of the improvement was generated in the first quarter when volume sales were significantly higher than the comparative months of 1979.

Since April, sales and profitability have been under increasing pressure and although measures are being taken to adjust to the reduced volume of output, the directors anticipate that profits for the year as a whole will be below those of 1979.

Last year the company reported pre-tax profits for the 12 months of £6.97m, compared with £4.61m for 1978.

The interim dividend is being raised from the equivalent of 0.58p, after allowing for the one-for-one scrip issue, to 0.64p net. Last time the final dividend was an adjusted 3.58p.

Tax increased from £1.25m to £1.62m and after interest of £222,000 (£310,000) retained profit edged ahead from £1.27m to £1.37m. Last time's figure included £226,000 from the sale of properties against nil this time.

● comment

Travis and Arnold responded quickly to the sudden collapse of building materials markets in the second quarter, reducing stocks and debtors enough to cut interest charges by nearly 30 per cent. Pre-tax profits are well ahead at the interim mainly because of the weakness of the comparative period and the group is pessimistic about the remainder of the year. Overall, volume is expected to be down 10 per cent, with the fall most severe in central heating equipment, which accounts for 20 per cent of sales, and new housing, where about 40 per cent of sales go. Pre-tax profit for the year could fall to £6m. That would leave the shares, at 124p, trading on a reasonable 7.2 multiple of the prospective earnings. The final dividend will probably be raised by 10 per cent despite the troubles, giving a prospective yield of 4.6 per cent.

GEORGE INGHAM £21,000 LOSS

For the first half 1980 George Ingham and Company (Holdings), worsted spinner, fell from a profit of £25,290 to a loss of £21,000 on sales up £0.55m at £1.64m. Again no interim dividend is to be paid and there is no tax charge. For the whole of 1979, 0.25p was paid from profit of £18,759.

McLaughlin & Harvey confident

DESPITE the generally depressed state of the construction industry, pre-tax profits of McLaughlin & Harvey, unquoted builder and civil engineer, increased from £425,000 to £557,000, on higher turnover of £21.78m, compared with £16.46m.

But after a sharp rise in tax from £75,000 to £293,000, net profits were lower at £264,000, against £350,000. The tax provision reflects a full charge for Corporation tax and no credit has been taken for anticipated stock relief which may be available in future years.

Earnings per 25p share dropped from 8.8p to 6.7p, while this time there is an interim dividend of 1.8p net — last year, a single final of 3p was paid from taxable profits of £980,000.

The company has a satisfactory order book and the directors are confident of its ability to maintain an acceptable level of work throughout the year.

	Half-year 1980 £000	1979 £000
Turnover	21,783	16,465
Profit before tax	557	425
Taxation	293	75
Net profit	264	350
From Govt. reserve	6	9
Minority loss	3	1
Exchange losses	108	57
Extraord. credit	42	†71
Dividends	73	—
Retained	134	*230

* Profit. † Debit.

W. CANNING

W. Canning, the UK electronics, chemicals and engineering company, is to sell its half share in Mowat-Canning (SA) of Johannesburg to E. S. Mowat and Sons, the co-shareholder. The sale price is R100,000 (£55,000), which is above book value.

New licence agreements have been entered into for the manufacture and licensing of Canning originate products which will result in the company's income from the South African market showing no reduction.

MINING NEWS

Seltrust profit 'disappointing'

BY KENNETH MARSTON, MINING EDITOR

REPORTING net profits for the six months fo June 30 of A$1.23m (£600,000) against A$1.06m for the previous four months to December 31 the young Australian Seltrust Holdings comments that the latest results are "very disappointing."

London's Selection Trust (now owned by British Petroleum) formed Seltrust Holdings last year as an Australian mining finance house. Selection Trust put the bulk of its important Australian interests into the newcomer which was designed as a vehicle for Australian domestic investment in the country'a mineral potential. Selection Trust bas waived its dividend entitlement for the past nine months in Seltrust Holdings.

The directors' disappointment with the latest results of Seltrust Holdings stems from the slow build-up of production from the Agnew nickel mine in Western Australia, which is encountering lower than expected mill ore grades, and the impact of strikes on the stake in the big Mount Newman iron ore operation.

However, Agnew production is now improving and a further increase in earnings has been achieved by the drillship "Reginnal Endeavour." It is stated that development of the 60 per cent-owned Teutonic Bore copper-zinc-silver project is on target and the mine sbould be in commercial production before next June.

Also in Western Australia, Seltrust bas decided to pull out of the Griffins' Find gold prospect following a disappointing outcome to preliminary feasibility atudies. This is a joint venture with Otter Exploration and yesterday shares of the lattar fell 10p to 74p.

If Mount Newman can manage to operate reasonably trouble-free, results of Seltrust Holdings for the second half of the year should make a better showing. But the company is essentially a long-term investment with its important participation rights in new business of Selection Trust in Australia. Seltrust Holdings were 2p off at 158p yesterday.

Denison to buy Koongarra

CANADA'S second biggest uranium producer, Denison Mines, is to purchase the important Koongarra uranium daposits in the Northern Territory of Australia.

The Australian government baa approved the proposed acquisition from Noranda Australia, another Canadian-owned company.

Koongarra ranks as one of the four major uranium deposits in the Northern Territory, holding about 30m lbs of uranium oxide. Government permission to work the find has not yet been given.

Mr. John Howard, treasurer of Denison, said in Canberra that the entry of the company (which has been mining and selling uranium since 1957) into the Koongarra venture would enhance the prospects for the viability of the project.

The Australian government is calling for 75 per cent Australian equity and Australian control by the time production begins.

PROSPECTS FOR SENTRUST AND NEW WITS

Many economists are forecashting a real economic growth in excass of 5.5 per cent for South Africa and such growth should ensure that industrial distributions will continue increasing, say the directors of Sentrust in their annual report.

Sentrust's own dividend distribution this year is 55 cents (30p) a share compared with 38 cents a share last year, an intrease of 17 cents a share. The report forecasts that the next dividend distribution should increase by at least the same amount.

Mr. A. M. D. Gnodde, chairman of New Witwatersrand Gold Exploration, says in his annual review the net asset value of the company rose to 921 cents (508p) a share by late August compared with 821 cents a share at end-June. The company should be able to increase its dividend distributions, he said, provided the prevailing price of gold is maintained during the current year.

ROUND-UP

South Africa's Gold Fields Property says that investigations into exploiting the company's old gold mine dumps bave shown that it would not pay to work them even at the current bullion price levels. But furtber work is being undertaken to find a more efficiant way of upgrading the material.

* * *

Australia'a CRA Explnratinn and Kitchener Mining say that the second bole of a series of four being drilled under the old Propbecy - Perseveraoce gold mine at Bamboo Creek in Western Australia has intersected rich values of 220.1 grammes per tonne gold and 43 grammes per tonne ailver over a narrow interval of 0.25 metrea. This was contained in a longer core length between 87.08 and 89.26 metres which averaged 42 grammes gold and 7.8 grammes silver.

Cooper Basin oil find

THE DULLINGARI No. 6/DM4 well, drilled in South Australia's Cooper Basin to help define the extent of the Dullingari Murta oil reservoir, has flowed oil at a rate of 2,180 barrels a day, reports Stephen Tompson.

The well was drilled by a consortium comprising Santos, 50 per cent, Delhi Petroleum, operator, 30 per cent, Vamgas, 10 per cent and South Australian Oil and Gas Corporation, 10 per cent.

Dullingari No. 6/DM4 is the fourth appraisal well drilled by the consortium. The first well, No. 5/DM1 flowed oil at a rate of 750 barrels a day, the second was dry and the third recovered only drilling mud.

The original Murta oil reservoir was discovered in 1978 when the Strzelecki No. 1 well produced a flow of 2,400 barrels a day.

The oil flow in No. 6/DM4 followed a drill stem test of the interval 4,804 to 4,868 ft. Surface flowing pressure was recorded at 382 psi. Target depth of the latest well is 5,200 ft.

ZAERIX ELECT.

Zaerix Electronics has acquired from Thorn Brimar, the Mazda radio valves and tubes marketing and distribution business based in Rochester. With effect from October 1, Zaerix will ba the exclusive licensed distributors of Mazda receiving valves, and on the aame date the business will be transferred to the London headquarters at 46 Westbourne Grove, W2.

BIDS AND DEALS

Mr. Ghafar among buyers of shares in Dunlop

BY ANDREW FISHER

Mr. Ghafor Baba, the prominent Malaysian politician and businessman, was yesterday confirmed as one of the recent buyers of shares in Dunlop Holdings, at least a fifth of whose shares are now in Far Eastern hands.

Late in July, the Department of Trade appointed two inspectors to find out who was behind the steady buying which had alarmed the rubber group and led to a sharp rise in its share price.

Their report is expected some time next month, earlier than usual for an investigation of this type. At yesterday's share price of 82p, down 2p after an initial rlae on the confirmation of Mr. Gbafar's interest, the group is valued in the market at nearly £110m.

Mr. Ghafar was first mentioned as a likely force behind the share pnrchases when the twn inspectors were appointed. Since then rumour has piled upon rumour, with yeaterday's undramatic announcement providing the first hard information.

Complying with the legal requirement that all shareboldings over 5 per cent muat be disclosed, a company called Pegi Malaysia Berhad stated that it bad bought 1.3m Dunlop shares last Thursday.

This brought the combined staka of Goodyield Plaza and subsidiaries Pegi Malaysia and Climate Engineering (Malaya), in whieb Mr. Ghafsr has large interests, up to 7.1m sbares, or 5.3 per cent of the total.

Dunlop aays it is sure that 20 per cent of its shares bave been bought by Malaysians. It is less certain about a further 6 per cent, and the inspectors are now trying to find out the identity of the buyer or buyers.

The Pegi Malaysia shares were chiefly bought through stockbrokers Laurence Prust and James Capel. A Prust nominee company, Lorient, bas been involved in a large part of the earlier Dunlop purchases, as bas Guimaco Nominees, part of UK merchant bankers Guinness Mahon.

Mr. Gbafar, a vice-president of the ruling United Malays National Organisation (UMNO) and a close associate of Finance Minister Tengku Razaleigb, beads Komplek Kewangan, the semi-official Malay finance and investment group.

Dunlop controls profitable estate and industrial companies in Malaysia, one possible reason for local interest in shares of the UK group, which is expected to report lower balf-time profits next week.

ARLEN ELECTRICAL ACQUIRES ALPHA

Arlen Electrical is to acquire Alpha Prodnctions for a maximum consideration of £125,534 to be satisfied by the initial issue of 110,000 ordinary 25p shares. The balance will comprise the payment of £15,534 in cash and the further issue of up to a maximum of 110,000 shares.

At June 30, 1980, Alpha, which provides film studio facilities at St. John's Wood Studios, had net assets of £57,803. Pre-tax profits for the year to that date were £6,394.

As a diversification move, Arlen launched in June a new subsidiary, Transvideo, to provide the first UK based mobile compuierised post production video editing facility.

By linking Transvideo's advanced technology to the more conventional Alpha facilities, the Arlen board considers that both subsidiaries will improve their trading prospects.

CHARLES CLIFFORD BUYS MORE OF NOBLE & LUND

Charles Clifford Industries, the loss-making metals group chaired by Mr. Oliver Jessel, now owns together with associates just over 15 per cent of the Noble and Lund engineering company. Previously, Clifford bad a holding of 422,500 shares, more than 7 per cent.

Mr. Jessel, whose Clairmace company, owns nearly 30 per cent of Clifford, said the latest batch of Noble and Lund shares—10,000 bought by Clifford and the rest by the associates—were picked up at around 7p or 8p compared with a net asset value of 38p.

HOFFNUNG OFFER NOW CLOSED

Burns Philp has announced that the offer for the 4.55 per cent cumulative preference shares of Hoffnung bas closed. Burns Philp acquired 376,345 prefereoce under the preference share offer (89.21 per ceot of the offer).

NatWest buys rest of Global

National Westminster Bank through its wbolly owned subsidiary, International Westminster Bank, has purchased the remaining 25.6 per cent of shares not already owned in Global Bank AG from the Gerling Konzern, a leading German insurance group.

At the same time the Gerling Konzern has purcbased from Global Bank 74.9 per cent of Kapitalfonds Kapitalanlagegesellschaft MBH, a Cologne-based investment fund management company. Global Bank is retaining a 25.1 per cent interest in this company.

Global has offices in Cologne, Hamburg, Dusseldorf and Munich, and at the end of 1979 had total assets of DM 849m.

KAYSER IMPROVES AT SIX MONTHS

COURTAULDS has sent out the official offers in connection with its proposed acquisition of the outstanding minority boldings in Kayser Bondor and Macanie (London), of 11.1 per cent and 15.6 per cent respectively.

One document reveals Kayser pre-tax profits for the first balf of 1980 up from £664,000 to £769,000, on a turnover ahead from £8.88m to £10.79m.

Kayser says that trading conditions; in brand lingerie continue to be difficult. In June it announced a cut-back in manufacturing capacity at the Dowlais factory, the cost of which will be charged as an extraordinary item and reflected in the full year results.

On the lingerie and foundation wear contract side a viable production level is being achieved although margins are under pressure, tha directors report. Hosiery business is more encouraging.

The Macanie document shows a fall in trading profits here from £192,000 to £168,000 for the first half of 1980, on sales of £9.4m against £10m. Taking in interest receivable at £11,000 (£76,000 payable), the pre-tax balance comes out at £179,000 (£116,000).

Trading conditions in both Macanie's clothing manufacturing and distribution have become increasingly difficult in the period. Recession conditions are likely to continoe for the rest of the year, the directors say.

SHARE STAKES

Globe Investment Trust—the NCB Staff Superannuation Scheme, the Mineworkers Pension Scheme, the Coal Industry Benevolent Trust and the Coal Mining Contractors Pension Scheme together bold 17,984,043 ahares (11.08 per cent).

Burnett and Hallamsbire Holdings—Sun Life Assurance Society, as a result of recent purchases, is now interested in 451,083 ordinary shares (5.102 per cent).

Linlood Holdings—D. S. T. Linnell, director, has disposed of 39,500 ordinary shares.

Tebbitt Group—The bolding of the London Trust of 7 per cent convertible culminlative redeemable prelerential has been increased to 500,000 shares (10.416 per cent).

Stroud, Riley, Drummond, Bradford—Harvey Michael Ross has increased bis holding to 653,938 shares (18.6 per cent).

STAKE ACQUIRED IN J. T. PARRISH

A 13.5 per cent stake in J. T. Parrish, the Newcastle department store operator, has been picked up by Mr. Fuad Rasban Khorsheed. The stake is represented by 97,025 shares. According to the same announcement by the company, Mr. J. S. Bounington, who bad owned 89,025 (12.4 per cent) no longer owns any interest in the company.

BRETTELL & SHAW

Rhodes and Cartwright, of Cradley Heath, West Midlands, manufacturer of galvanised holloware, bas acquired, for an undisclosed sum, Brettell and Shaw, one of the largest producers of galvanised and plastic products supplied to Government departments, nationalised industries, councils and builders' merchants, throughout the UK.

The two companiea will have a turnover in excess of £3m and a workforce of over 250 employees.

WARD WHITE

Norris Industries, an engineering subsidiary of the Ward White Gronp, bas acquired from the Columbus Dixon Gronp, its waste compactor business. This enterprise will in luture be known aa tbe Waste Compactor Division of Norris Industries Rusbden.

JOHNSON MATTHEY

Johnson Matthey bas acquired the Max Marx Color and Chemical Company, Inc, a U.S. manufacturer and supplier of organic pigments and colours for use in printing, paints, plastics, food and cosmetic industries.

Max Marx is based in Irviogton, New Jersey. The value of the deal was not disclosed.

The acquisition will broaden the opportunities for Johnson Matthey's UK-based colour companies, Blythe Colours and Cowan Colours.

FOSECO MINSEP/UNICORN INDS.

The offer by Foseco Minsep for the preference shares in Unicorn Industries bas beeo accepted by 47 holders (67.1 per cent) in respect of 161,008 shares (40.5 per cent of the capital).

Foseco has decided to declare the offer, which is worth 40p in cash for each preference share, unconditional. It was previously announced that the offer would close on September 29, and this is still the intention.

WILKINSON MATCH

At the meeting of Wilkinson Match yesterday, resolutions pnt to holders of the 10 per ceot convertible unsecured loan stock 1984-98 were passed. The special resolution to effect a capital reorganisation was also passed.

An announcement of the level of acceptances and of any revision or extension thereof will be made by Allegheny Ludlum today.

RESTMOR GROUP (baby carriages and nursery furniture)—Results for year ended April 30, 1980 reported August 20. Shareholders' funds £4.79m (£3.88m). Cash £256,573 (£369,021). Bank overdraft (secured) £303,559 (£183,715). Meeting, 54 Baker St., W, October 10, 11.30 am.

BASE LENDING RATES

A.B.N. Bank	16 %	■ Hambros Bank	16 %
Allied Irish Bank	16 %	■ Hill Samuel	§16 %
American Express Bk.	16 %	C. Hoare & Co.	†16 %
Amro Bank	16 %	Hongkong & Shanghai	16 %
Henry Ansbacher	16 %	Industrial Bk. of Scot.	16½ %
A P Bank Ltd.	16 %	Keyser Ullmann	16 %
■ Arbuthnot Latham	16 %	Knowsley & Co. Ltd.	18 %
Associates Cap. Corp.	16 %	Langris Trust Ltd.	16 %
Banco de Bilbao	16 %	Lloyds Bank	16 %
Bank of Credit & Cmce.	16 %	Edward Manson & Co.	17 %
Bank of Cyprus	16 %	Midland Bank	16 %
Bank of N.S.W.	16 %	■ Samuel Montagu	16 %
Banque Belge Ltd.	16 %	■ Morgan Grenfell	16 %
Banque du Rhone et de la Tamise S.A.	16½ %	National Westminster	16 %
Barclays Bank	16 %	Norwich General Trust	16 %
Bremar Holdings Ltd.	17 %	P. S. Refson & Co.	16 %
Brit. Bank of Mid. East	16 %	Rossminster	16 %
■ Brown Shipley	16 %	Ryl. Bk. Canada (Ldn.)	16 %
Canada Perm't Trust	17 %	Schlesinger Limited	16 %
Cayzer Ltd.	16 %	E. S. Schwab	16 %
Cedar Holdings	16 %	Security Trust Co. Ltd.	17 %
■ Charterhouse Japhet	16 %	Standard Chartered	16 %
Choulartons	16 %	Trade Dev. Bank	16 %
C. E. Coates	16 %	Trustee Savings Bank	16 %
Consolidated Credits	16 %	Twentieth Century Bk.	16 %
Co-operative Bank	*16 %	United Bank of Kuwait	16 %
Corinthian Secs.	16 %	Whiteaway Laidlaw	16½ %
The Cyprus Popular Bk.	16 %	Williams & Glyn's	16 %
Duncan Lawrie	16 %	Wintrust Secs. Ltd.	16 %
Eagil Trust	16 %	Yorkshire Bank	16 %
E. T. Trust Limited	16 %		
First Nat. Fin. Corp.	19 %		
First Nat. Secs. Ltd.	19 %		
Robert Fraser	16 %		
Antony Gibbs	16 %		
Greyhound Guaranty	16 %		
Grindlays Bank	‡16 %		
■ Guinness Mahon	16 %		

■ Members of the Accepting Houses Committee.

* 7-day deposits 14%, 1-month deposits 14¼%.

† 7-day deposits on sums of £10,000 and under 14%, up to £50,000 14½% and over £50,000 15%.

‡ Call deposits over £1,000 14%.

§ Demand deposits 14½%.

Thomas Tilling plans to invest further $8.5m in U.S.

THOMAS TILLING, the large industrial holding group, is adding yet anolher company to its list of U.S. acquisitions, with the planned purchase of Bourns Medical Systems, of Los Angeles, for $8.5m (£3.5m). Tilling has spent some £160m on U.S. expansion since the beginning of 1977.

Bourns, a wholly-owned subsidiary of the privately owned business of Bourns Inc, makes medical respiratory and related equipment and supplies. It is one of the leading U.S. prodncers of sdult and infant lung ventilators and ventilator monitors. The company's products are also marketed and serviced in Europe, the Middle East and Africa.

For 1979 Bourns achieved salea of $13.2m and profits of $884,000. The international market for the company'a products is expanding strongly and sales for tbe first balf of 1980 reached $7.8m.

Tilling's interests in the manufscture and marketing of medical equipment are controlled through Intermed. Two of its UK subsidiaries, Cape Engineering and Penlnn, are also prodncers of lnng ventilators, and anaesthesia equipment respectively.

The company says that the acquisition of Bourns will provide opportunities for increased product development and widen coverage in world markets.

BRITISH SYPHON SELLS CUTLERY MANUFACTURER

British Sypbon Industries has sold its cutlery manufacturing subsidiary, George Ibberson and Co., to MAB Products, a private scissor making company in Sheffield. The consideratioo is 175 ordinary £1 sbares in MAB issued at par and representing 15 per cent of the enlarged company.

A loan outstanding to British Syphon equal to the book value of Ibberson's fixed and current assets; will be paid off as to debtors less creditors within four months; as to fixed assets on completion, and as to stock and work-in-progress as sold or used in production.

The cash thus made available and amounting to some £350,000 will be used to expand the group's mainstream activities.

HOOVER TRUST BOOSTS STAKE IN PROVINCIAL

Hoover Trust Fund has purchased a furtber 290,000 ordinary shares in Provincial taking its bolding to 1,585,653 ordinary shares or 7.2 per cent of the capital.

Hoover is the largest single institutional shareholder in Provincial. Institutions now bold approximately 30 per cent of the company.

STRONG & FISHER/BARROW HEPBURN

Agreement has been reached for Strong and Fisher to acquire Barrow Hepburn's 40 per cent holding in the New Zealand quoted company of Colyer Watson Holdings for £700,000 cash.

The stake is held through Barrow Hepburn's Netherlands subsidiary and the deal is expected to be completed on October 1.

Colyer is principally involved in processing and trading in meat industry by-products, especially skins, hides and tallow.

For the nine months to October 1, 1979 Colyer produced attributable profits of NZ$761,767 but unaudited figures for the following six months showed a $161,829 loss. Colyer's net assets at October 1 were $3.74m.

BLACK AND EDGINGTON

In a letter to shareholders concerning tha proposed sale of its A-Line Caravans business, Black and Edgington, the camping, caravan and workwear group, explains that its recent £265,000 pre-tax loss was eveoly split between the A-Line division and other operations. The loss for A-Line is stated at £130,000 and that for "continuing operations" at £135,000.

Black and Edgington is asking shareholders to approve the sale of A-Line to a private group of its original owners for £1.1m. An EGM meeting has been scheduled for September 29 in London to vote on the sale.

The group estimates its net tangible assets per ordinary stock unit at 91p on the basis of the balance sheet at June 30 and at 81p on the basis of a disposal of A-Line.

Borrowings for the group, excluding A-Line and its subsidiaries were £11.3m as at August 29.

COSTAIN OFFER UNCONDITIONAL

The offers made by Costain to acquire the capital in issue and to be issued of County and District Properties have become unconditional in all respects.

Acceptances have been received in respect of 14.84m new ordinary and 14.84m deferred shares of C. and D., representing 99 per cent. Acceptors in respect of 9.3m new ordinary and 9.3m deferred shares have elected to receive the loan note alternative.

The offers will remain open for acceptance until further notice, though the loan note alternative has now closed. Costain intends, in due course, to acquire the balance compulsorily.

RTD GROUP

The unconditional cash offer by Mr. J. H. Dyer and other investment clients to acquire RTD Group bas been accepted in respect of 8,399 ordinary ahares (0.38 per cent). With the ordinary and preference shares already owned, Mr. Dyer and associates now have 79.42 per cent of the voting rights of RTD.

The offer, which was unconditional, bas now closad.

Overseas activities lift Simon to £7.6m midway

WITH THE performance of its overseas companies partly compensating for the severe pressures on its UK-based activities, Simon Engineering increased pre-tax profits from £7.25m to £7.62m for the first six months of 1980.

Turnover climbed £21.26m to £155.23m, while profits included higher associates' contributions of £330,000 (£228,000) and net interest receivable up from £672,000 to £992,000. Depreciation charge was £2.3m (£1.89m).

The directors say that with the continuing strength of sterling and fierce international competition, they see no remission of the pressures during the rest of this year and next year. Every effort, however, is being made to maintain profit growth in 1980.

Tax for the half year took £3.26m, against an adjusted £2.17m, and after minorities, the attributable balance emerged down from £4.81m to £3.93m.

The interim dividend is maintained at 4p net per 25p share, costing £994,000 (same) — last year's total was 11.33p on record £18.54m pre-tax profits.

The group is engaged in the manufacture of specialised machinery, process plant contracting, merchanting and storage and oil services.

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Increased costs hit H. Cory

CONSIDERABLE INCREASES in costs in all its departments led to a fall in pre-tax profits of Horace Cory and Co. from £249,000 to £178,000 for the first half of 1980. Turnover of this chemical colour manufacturer was little changed at £1.39m, against £1.37m.

Since June 30, the volume of orders has fallen and, as an alternative to redundancies, short time working was introduced from August 11 on the basis of a three-day week as a temporary measure to reduce costs.

Earnings per 5p share dropped from 1.37p to 0.9p, but the net interim dividend is held at 0.6p —last year's total payment was 1.3p from pre-tax profit of £479,995.

Half-yearly profits included interest receivable up slightly at £29,000 (£26,000), and was subject to tax of £93,000 (£130,000).

Corporation tax has been provided for at 52 per cent, but the effective rate at the end of the year should be lower because of capital allowances in expenditure now being incurred to construct and equip the factory extension.

OIL AND ASSOCD.

The balance of Oil and Associated Investment Trust's convertible unsecured loan stock 1988-93 not converted, amounting to £104,673, is to be compulsorily converted on October 15 into ordinary shares or repaid.

Jentique loss in second half

HIT BY a sharp fall in demand and exceptional costs related to redundancies and short time working, Jentique (Holdings), furniture and clock maker, declined from a £280,198 pre-tax profit into a £73,537 loss in the second half of 1979-80.

This left the total for the year to June 30, 1980, down from £573,158 to £235,493 and the final dividend is being omitted. A 1.03p net interim was paid in April.

Sales for the 12 months slipped £1.33m to £10.58m.

Since year-end, orders have shown some increase enabling a return to full time working, and there has been a modest improvement in trading conditions permitting a reduction of stock levels in both divisions.

The directors say that if the current pattern of trading can be maintained in both divisions for the six months to December 31 this year they will consider paying an interim dividend in April 1981. For the whole of 1978-79 the distribution was 2.47995p.

The tax charge for the year was £20,191 (£169,786) leaving earnings per 25p share at 2.72p (5.1p). There was an extraordinary debit this time of £50,848.

The general lack of consumer demand, made worse by the strong pound, forced Metamec clock making division to make redundancies in March. It is now, however, operating full time and poised to take maximum advantage of its newly developed quartz clock movements, the directors state.

KENNEDY BROOKES RESTAURANT DEAL

Kennedy Brookes has acquired the lease on a restaurant at Knightsbridge Green through its subsidiary Brookes Hotels. After renovations, Kennedy Brookes plans to reopen the restaurant in October under the name Newports.

The lease, which has nine years to run with a rent review in 1982, has been acquired, together with the fixtures and fittings, for a total consideration of £60,000.

Consideration will be satisfied as to £30,000 in cash and the balance by the issue of 36,363 shares. In certain circumstances, a further 10,000 shares may be issued in 1982 credited as fully paid.

The vendors have undertaken not to dispose of any shares for at least 12 months. One of them, Lord Newport, has accepted an invitation to join the Board of Brookes Hotels and intends to take an active interest in all of the group's restaurants.

BOARD MEETINGS

The following companies have notified dates of board meetings to the Stock Exchange. Such meetings are usually held for the purpose of considering dividends. Official indications are not available as to whether dividends are interims or finals and the subdivisions shown below are based mainly on last year's timetable.

TODAY

Interims—Barrow Hepburn, Blockleys, Bodycote International, Executex Clothes, Home Charm, Inveresk, Bernard Matthews, Oltex, Wadkin, Watts, Blake, Bearne, Willis Faber.

Finals—Elder Smith Goldsbrough Mort, London Merchant Securities, George H. Scholes, Sirdar.

FUTURE DATES

Interims—	
Camrex	Sept. 19
Dunlop	Sept. 25
Estates and General Investments	Sept. 22
General and Commercial Investment Trust	Sept. 25
Laing (John)	Sept. 30
London and Holyrood Trust	Sept. 18
London and Provincial Trust	Sept. 18
Ready Mixed Concrete	Sept. 30
Sendhurst Marketing	Sept. 23
600 Group	Nov. 27
Stag Furniture	Sept. 23
Stewart Wrightson	Sept. 23
Williams and James (Engineers)	Sept. 26
Finals—	
Kwik Save Discount	Nov. 20
Mucklow (A. and J.)	Sept. 22

Midway drop at Cockburn Cement

Although trading surplus of Cockburn Cement showed an improvement, higher depreciation and a sharp increase in interest charge meant that pre-tax profits of this 85 per cent owned Australian subsidiary of Rugby Portland Cement dropped from A$2.01m to $1.16m for the first half of 1980.

Further modification to the lime plant deferred its expected cost benefits, the directors state.

Trading surplus rose by $0.28m to $3.87m, but interest took $1.14m ($0.45m) and depreciation, $1.57m ($1.13m). No tax is again payable due to investment allowances brought forward.

Turnover improved from $14.15m to $15.03m.

There seems little prospect of any substantial increase in activity for the remainder of this year, while the disruption of sales to Alcoa due to two months' industrial action at their Pinjarra refinery, has also had an effect.

The interim dividend is unchanged at 2.25 cents per share.

INGLIS

Listing of the 5 per cent irredeemable debenture stock of Inglis and Co. has been cancelled at the company's request. The market capitalisation and shareholding position is such that an adequate market in the security cannot be maintained.

Application to make specific bargains under Rule 163 (2) may be submitted.

Pittard profits tumble but interim maintained

LARGELY DUE to stock losses arising from a worldwide exceptional drop in hide and skin prices between the beginning and end of the period, taxable profits of Pittard Group, leather manufacturer, plunged from £957,412 to £46,182 for the six months to June 30, 1980.

After tax of £4,826 (£291,758) net profits slumped from £665,654 to £41,356, but the interim dividend is being held at 1.375p per 25p share, again absorbing £100,753—payments in 1979 totalled 4p and pre-tax profits were £1.49m.

Mr. N. F. Wood, the chairman, says that if demand improves and hide and skin prices recover, it should offset some of the first half stock losses.

Sales for the half year fell from £11.96m to £10.58m with the reduction entirely in the home market, where sales were affected by cheap imports of leather; customers in the shoe and clothing industry were suffering similarly from cheap imports and low demand.

Exports were maintained at previous levels, but margins were considerably reduced to offset the high value of sterling against the dollar and other major currencies.

The chairman says the second half is extremely difficult to forecast, but if interest rates fall and the dollar strengthens against sterling, the group will become much more competitive at home and overseas and margins will correspondingly improve.

In addition, the group's cash position will enable it to ride out the storm which is gravely affecting much of British manufacturing industry, he states.

The interim results include trading losses incurred during the closing down of the Beckenham factory, but exclude the terminal losses which will be offset against the considerable surplus expected to arise from the sale of the site for redevelopment.

● comment

At least the hide price cannot drop much further. Its tumble from over £1 a kilo 18 months ago to 30p in June this year has dragged Pittards' profits down in its wake—to the tune of a company estimate of over £500,000 in the half. The Beckenham plant, whose sale is now being negotiated, turned in a final trading loss of around £120,000, and its closure should trim the group wage bill by some £500,000. An interest bill up from £100,000 to £300,000 for the half, with the year end cash balance transformed into an overdraft, completes the background to the profits collapse. For the current period, hide prices have come 7p off the bottom, and seasonal factors may be expected to help them up further next month. The maintained dividend could be defended on balance sheet strength and expected cashflow from the Beckenham sale, but short of exceptional factors coming to the aid of the hide market, there is little short-term cheer. At 37p, down 3p, the shares would yield 16 per cent with a maintained final—while at £2.7m the company is capitalised at less than half the value of its leather stocks.

Charnos advances to £1.1m

FOR 1979, pre-tax profits of Charnos, the stockings, tights and lingerie and knitwear manufacturer, jumped from £733,615 to £1.1m on increased turnover of £18.54m compared with £15.99m.

Sales for the first half of 1980 are again ahead of last year's, Mr. R. Noskwith, chairman, says. He adds, however, that the effects of the economic situation combined with the cessation of grants in Northern Ireland make a drastic reduction in group profits inevitable.

Tax last year took £237,042 against £346,824, giving earnings per 25p share of 42.04p compared with 18.11p. The dividend on the privately held ordinary capital is again 1.05625p net.

The chairman says Government support had less influence on the result than in 1978 but was nevertheless substantial—therefore the group's performance can still not be regarded as satisfactory.

A successful year in the two divisions selling under the Charnos trade mark gave a good result from branded hosiery and an outstanding one from lingerie, Mr. Noskwith adds. At the other extreme, continuing difficulties with knitwear produced a further large loss.

The board reports there has been no improvement in the double jersey area and has thus decided to withdraw entirely from its involvement in the manufacturer of double jersey fabrics. Although the recession has affected all divisions, the group has avoided serious redundancies except for the closure of its Burton-on-Trent ancillary knitwear factory with a loss of 44 jobs.

Meeting: Ilkeston, September 29, 3.30 p.m.

WOLSTENHOLME RINK ACQUISITION

Charles Openshaw and Sons (Manchester), a subsidiary of Wolstenholme Rink, has acquired the assets and goodwill of the print division of Aerostyle from the joint receivers of that company, Mark Homan and Gordon Horsfield of Price Waterhouse and Co. The value of the assets being acquired is approximately £160,000.

Openshaw intends to continue and develop the business formerly carried out by the Aerostyle Print division. It has particular interest in Intergran anti-set-off spray powder and the related range of Aeroset powder spraying equipment, which will continue to be produced and sold under the existing trade names.

Leadenhall dips but pays more

THOUGH HIGHER technology activities at Leadenhall Sterling made good progress 1980 first half performance was affected by the ending of its spectacle frame agency and recession in the fork lift truck market. Taxable profit for the six months to the end of June dipped £32,000 to £460,000 on sales up £1.05m at £6.21m.

Mr. I. T. Henderson, the chairman of this British and Commonwealth Shipping Company subsidiary, warns that with this pattern continuing in the second-half trading profits for the year will be down on 1979 when the pre-tax total reached £985,000.

However, the net interim dividend is being stepped up to 1.375p (1.25p) and the directors hope to recommend a maintained final of 1.875p.

Mr. Henderson adds that the directors are confident that the company can overcome any short-term problems and resume growth given even a modest improvement in trading conditions. "Our financial position is strong and we are actively pursuing further expansion of our interests in technology."

After tax for the half year of £247,000 (£256,000) stated earnings per 25p share were down 0.6p at 4.7p.

Federated Land down midway

ON TURNOVER down from £6.68m to £4.34m, pre-tax profits of Federated Land (formerly Federated Land and Building) the property developer, fell from £626,000 to £487,000 for the six months to June 30, 1980. The result included exceptional gain from sale of undeveloped land down from £155,000 to £132,000.

Mr. James Meyer, chairman, says despite the deepening recession, the company is fortunate in having an increasing rental income from its investment properties to help offset the fall in housing demand and the pressure on margins. Nevertheless, he adds, as the economic conditions continue to deteriorate, it becomes increasingly probable that the profits for the year will not be as high as for 1979, when the pre-tax total was £1.11m.

Interest charges this time totalled £1.06m, compared with £735,000. Tax took £151,000 (£159,000), after taking credit of £119,000 for first year allowances relating to plant and fittings installed in an investment property.

The attributable balance was £336,000 against £467,000 last time, and dividends absorbed £118,000 (£106,000). Earnings per 25p share were down at 3.1p (4.4p).

The interim dividend is raised to 1.1p net (1p). Last year a total dividend of 3.15p was paid.

ROBERT FLEMING FORMS INSURANCE BROKING OFFSHOOT

Robert Fleming Holdings has formed an insurance broking subsidiary. Directors of the new company, Robert Fleming Insurance Brokers, are to be initially Mr. Peter Stoddart and Mr. Clive Bowring, who both left the C. T. Bowring insurance broking group following its takeover by Marsh and McLennan of the U.S.

The company, operating from offices in the P and O Building, Leadenhall Street, intends to make an application to become an approved Lloyd's broker at an early date. It plans to carry out a wide range of international insurance broking activities and already has indications of a substantial business volume.

The company will have an initial capital of £1m and Mr. Bowring and Mr. Stoddart may be taking up to a 20 per cent stake interest in the equity. Flemings will hold not less than 51 per cent in the new company.

James Fisher holds profit

TAXABLE profits of James Fisher and Sons, shipowner and ship and insurance broker, edged ahead from £1.93m to £2.15m in the first half of 1980 on sales of £7.69m, compared with £6.82m.

The surplus was struck after interest and dividends received of £253,724 (£107,274) and was after charging bank and mortgage interest of £170,725 (£187,071). Depreciation took £1.05m (£895,546).

After a higher tax charge of £74,711 (£27,458), stated earnings per 25p share are up from 8.34p to 9.13p.

The interim dividend is increased from the equivalent of 0.75p, after allowing for the one-for-one scrip issue, to 1p net. Last time a final equal to 1p was paid from pre-tax profits of £2.97m.

The directors say the modest increase in profits was achieved despite the downturn in the economy, the major world-wide recession and the damaging effects of the steel strike during the first three months.

They say it would be imprudent to attempt to make a forecast for the remainder of the year, adding that the company will do well if it is able to maintain its past record of progress.

Bifurcated Engineering down to six months

THOUGH TURNOVER of Bifurcated Engineering increased from £7.34m to £8.73m for the half year to June 30, 1980, pre-tax profits of the manufacturer and distributor of rivets and other cold formed products, parts feeding and packaging equipment fell from £819,000 to £478,000.

Mr. J. M. A. Paterson, chairman, says the recession has affected orders in the UK, and the strong pound has resulted in reduced sales to the U.S. While every effort is being made to maintain the profits achieved in the first six months, he adds, this will depend upon the demand in the UK not deteriorating any further.

Interest charge for the half year jumped from £42,000 to £153,000.

After a tax charge of £248,000 (£425,000), the attributable balance was £230,000 compared with £394,000 last time. Dividends absorbed £89,000 (£86,000). Earnings per 25p share were down at 3.03p (5.24p).

The interim dividend is held at 1.15p net—last year a total dividend of 3.5p was paid from pre-tax profits of £1.42m.

THE GREAT NORTHERN TELEGRAPH COMPANY (LIMITED)

THE GREAT NORTHERN TELEGRAPH COMPANY'S HOLDING COMPANY LIMITED

Interim Statement for the first half of 1980 for The Great Northern Telegraph Company Limited of Denmark

The operations of The Great Northern Telegraph Group show some improvement for the first half of 1980 in both turnover and earnings.

The improvement derives from both the Parent Company and the Subsidiaries with the exception of LK-NES which was seriously affected, especially in the second quarter, by the falling activity within the Danish building and construction sector. Intensified competition is experienced in most export markets. This prevents sufficient price adjustments to cover cost increases. On the Danish market the downward trend has been more marked since the second quarter. The steep decline in the demand on the domestic market has also led to an unintentional, large build-up of stock, the financing of which is a great burden because of the present high level of interest. The report for 1979 mentions activities aimed at increasing productivity and reducing operating expenses in the Group Companies. These activities were carried through as planned and made a positive contribution towards the result. The very weak market trend has the opposite effect because the necessary adjustments to the lower rate of activity will have no more than a negligible influence on costs within the present year. Consequently, the Group's result for 1980 is expected to be on the same level as the result for 1979.

Tha Board of Directors.

CURRENCIES, MONEY and GOLD

Pound eases

Sterling lost ground in currency markets yesterday, compared with Friday's levels, but after an initial mark down, showing some signs of stabilising. Its trade weighted index was down at 75.6 compared with 76.2 on Friday, but was calculated at 75.6 for all three of the day's calculations. Against the dollar it opened at $2.3985-2.3995 and touched a high of $2.400-2.4010, before coming back to its lowest level of the day at $2.3860-2.3870. These were all early movements and by 9 am, the pound had recovered to $2.3910. At noon it was quoted at $2.3950, but eased further to $2.3880 before coming back to $2.3965-2.3975, a fall of 1.75c. Sterling may have been weakened by growing speculation that MLR will be cut in the near future, and also fears of a national strike by UK dock workers.

The U.S. dollar was firmer initially, and finished above Friday's levels but below its best level of the day. Early trading may have reflected a firmer trend in Euro-dollar rates following the increase in U.S. prime rates last Friday to 12½ per cent. Against the D-mark it finished at DM 1.7830 compared with a high of DM 1.7870, and Friday's close of DM 1.7805. Similarly in terms of the Swiss franc it finished at SwFr 1.6325 compared with a high of SwFr 1.6410 and SwFr 1.6300 on Friday. On the other hand the Japanese yen showed a net rise on the day, with the U.S. unit easing to Y212.60 from Y213.10. On Bank of England figures, the dollar's trade weighted index rose to 83.4 from 83.2.

DEUTCHE MARK—One of the weaker members of the European Monetary System of late, but showing signs of recovery against the dollar following doubts about the future trend in U.S. interest rates and Federal Reserve monetary policy ahead of the Presidential election—There was no intervention by the Bundesbank at yesterday's fixing in Frankfurt when the dollar was fixed at DM 1.7831, compared with DM 1.7805 on Friday. Trading was generally quiet, with the dollar showing a firmer tendency on higher Euro-dollar rates, which followed the latest rise in U.S. prime rates to 12½ per cent. Sterling slipped to DM 4.2710 from 4.2960 on rumours that Saudi Arabia would not be cutting back oil production. The pound also reacted to indications that UK interest rates may fall in the near future. Elsewhere the Swiss franc eased to DM 1.0900 from DM 1.0925, while the French franc was higher at DM 43.025 per FFr 100 against DM 43.00 previously.

FRENCH FRANC—Showing a weaker tendency within the EMS, and recently displaced at the top of the system by the Dutch guilder and Irish punt—The French franc was slightly firmer overall yesterday at the Paris fixing, rising in terms of sterling and the Deutsche Mark, although on the other hand the dollar was slightly stronger. Dealers noted that figures for August showed a narrowing in the French trade deficit to FFr 4.02bn from FFr 6.66 in July, but was wider than the previous year's figure of FFr 3.17bn. The U.S. dollar rose to FFr 4.1465 from FFr 4.1395, while sterling eased to FFr 9.9250 from FFr 9.9940. The Deutsche Mark was also weaker at FFr 2.3247 against FFr 2.3258 on Friday.

ITALIAN LIRA — Weakest member of the EMS, reflecting high inflation and balance of payments problems, and further undermined by rumours of devaluation — The lira was slightly firmer at yesterday's fixing in Milan, rising against the U.S. dollar and sterling as well as the Swiss franc and Dutch guilder. Figures showed an increase in Italy's official reserves in July to $57.791bn from $54.923 in June and $34,973 in July 1979, with the rise seen as a reflection of the increase in tourist trade. The dollar fell to L845.35 from L847.05, while sterling was lower at L2,030.5 compared with L2,044.3 on Friday.

THE POUND SPOT AND FORWARD

Sept. 15	Day's spread	Close	One month	% p.a.	Three months	% p.a.
U.S.	2.3860-2.4010	2.3965-2.3975	0.97-0.87c pm	4.60	2.10-2.00 pm	3.42
Canada	2.7730-2.7920	2.7900-2.7910	1.50-1.40c pm	6.24	3.30-3.20 pm	4.66
Nethlnd.	4.62-4.66½	4.64½-4.65½	2½-1½c pm	5.15	5¾-4¾ pm	4.52
Belgium	68.25-68.80	68.55-68.65	27-17c pm	3.85	68-48 pm	3.09
Denmark	13.16-13.25	13.20-13.21	1½-3½ore dis	−2.27	11½-12¼dis	−3.67
Ireland	1.1260-1.1355	1.1336-1.1345	0.25-0.15p pm	2.12	0.50-0.40 pm	1.59
W. Ger.	4.25-4.29	4.27-4.28	2¼-2¼pf pm	7.72	7⅛-6⅝ pm	6.67
Portugal	112.20-118.40	112.00-119.20	10c pm-28 dis	−1.41	60pm-105dis	−0.75
Spain	174.65-175.90	175.80-175.90	39-90c dis	−4.40	205-285dis	−5.69
Italy	2024-2037	2032-2033	2½-4½lire dis	−2.07	31-34 dis	−6.40
Norway	11.52-11.60	11.56¾-11.57¾	5½-3½ore pm	4.54	9¼-7⅛ pm	2.96
France	9.89-9.96	9.92¼-9.93¼	4¼-3¼c pm	4.53	9-8c pm	3.42
Sweden	9.92-9.98	9.95-9.96	par-¼ore dis	0.45	3½-4 dis	−1.48
Japan	503-513	509-510	1.95-1.55y pm	4.12	4.86-4.45 pm	3.65
Austria	30.10-30.35	30.25-30.30	13-11gro pm	4.76	29-24 pm	3.50
Switz.	3.90-3.94	3.90¾-3.91¾	4-3c pm	10.73	10-9 pm	9.71

Belgian rate is for convertible francs. Financial franc 68.95-69.05. Six-month forward dollar 2.72-2.62c pm, 12-month 3.35-3.20c pm.

THE DOLLAR SPOT AND FORWARD

Sept. 15	Day's spread	Close	One month	% p.a.	Three months	% p.a.
UK†	2.3860-2.4010	2.3965-2.3975	0.97-0.87c pm	4.60	2.10-2.00 pm	3.42
Ireland†	2.1100-2.1140	2.1110-2.1130	0.45-0.35c pm	2.27	1.15-1.05 pm	2.08
Canada	1.1628-1.1643	1.1628-1.1631	0.12-0.07c pm	0.98	0.36-0.31 pm	1.15
Nethlnd.	1.9372-1.9400	1.9380-1.9390	0.25-0.15c pm	1.24	0.65-0.55 pm	1.24
Belgium	28.57-28.65	28.60-28.62	1c pm-½ dis	0.10	1-3 dis	−0.28
Denmark	5.5065-5.5185	5.5100-5.5115	2.85-3.35ore dis	−6.75	5.25-9.75dis	−6.89
W. Ger.	1.7810-1.7870	1.7825-1.7835	0.54-0.50pf pm	3.50	1.56-1.51 pm	3.44
Portugal	49.57-49.80	49.65-49.75	15-30c dis	−5.43	40-65 dis	−5.03
Spain	73.28-73.44	73.38-73.43	50-70c dis	−9.81	160-190 dis	−9.54
Italy	847.80-848.60	848.20-848.50	4½-6lire dis	−7.43	21-32 dis	−10.37
Norway	4.8236-4.8285	4.8260-4.8275	0.15ore pm-0.35dis	−0.25	0.50-1.00dis	−0.82
France	4.1410-4.1500	4.1410-4.1425	0.10c pm-par	0.14	0.10pm-0.05dis	0.02
Sweden	4.1520-4.1605	4.1525-4.1540	1.75-1.90ore dis	−5.27	5.00-5.15dis	−4.89
Japan	210.60-212.80	212.55-212.65	0.10-0.25y dis	−0.99	0.15 pm-par	0.14
Austria	12.61¾-12.63½	12.62¼-12.63¼	0.60gro pm-par	0.28	0.90pm-0.85dis	0.01
Switz.	1.6310-1.6410	1.6320-1.6330	0.84-0.79c pm	5.99	2.60-2.55 pm	6.31

† UK and Ireland are quoted in U.S. currency. Forward premiums and discounts apply to the U.S. dollar and not to the individual currency.

CURRENCY MOVEMENTS

Sept. 15	Bank of England Index	Morgan Guaranty Changes %
Sterling	75.6	−30.2
U.S. dollar	83.4	−10.1
Canadian dollar	80.6	−17.2
Austrian schilling	155.9	+24.3
Belgian franc	113.1	+13.3
Danish kroner	106.2	−4.6
Deutsche mark	154.3	+43.6
Swiss franc	197.7	+80.2
Guilder	120.3	+20.2
French franc	101.0	−6.2
Lira	52.6	−51.0
Yen	133.8	+31.5

Based on trade weighted changes from Washington agreement December, 1971 (Bank of England Index=100).

CURRENCY RATES

Sept. 12	Bank rate %	Special Drawing Rights	European Currency Unit
Sterling	16	0.547835	0.528980
U.S. $	10	1.32247	1.42121
Canadian $	10.57	1.53509	1.65073
Austria Sch.	6¾	16.0608	17.9001
Belgium F	12	37.7652	40.6004
Danish K	13	unavail.	7.82373
D'mark	7½	2.35359	2.53117
Guilder	9	2.53782	2.74275
French Fr.	9½	5.47188	5.88451
Lira	13	1119.02	1204.70
Yen	8.25	286.541	303.430
Norwgn. Kr.	9	6.36013	6.85022
Spanish Pta.	R	96.6803	103.926
Swedish Kr.	10	5.48576	5.90370
Swiss Fr.	3	2.15438	2.31750

OTHER CURRENCIES

Sept. 15	£	$		£ Note Rates
Argentina Peso	4581-4601	1917-1924	Austria	30.10-30.40
Australia Dollar	2.0405-2.0446	0.8523-0.8530	Belgium	68.63-69.23
Brazil Cruzeiro	134.87-135.87	56.54-56.74	Denmark	13.11-13.21
Finland Markka	8.70-8.72	3.6425-3.6435	France	9.88-9.93
Greek Drachma	102.613-104.985	42.65-42.80	Germany	4.26¼-4.28¼
Hong Kong Dollar	11.80¼-11.61¼	4.9395-4.9415	Italy	2015-2110
Iran Rial	n.a.	n.a.	Japan	507-518
Kuwait Dinar(KD)	0.035-0.041	0.2665-0.2666	Netherlands	4.02½-4.06
Luxembourg Frc.	68.55-68.65	28.60-28.62	Norway	11.46-11.39
Malaysia Dollar	5.0410-5.0510	2.1100-2.1120	Portugal	113¼-125½
New Zealand Dlr.	2.4285-2.4333	1.0146-1.0135	Spain	170½-176
Saudi Arab. Riyal	7.81-7.97	3.3190-3.3210	Sweden	9.89-9.99
Singapore Dollar	5.0020-5.0770	2.1115-2.1155	Switzerland	3.90¼-3.93¼
Sth. African Rand	1.8033-1.8050	0.7525-0.7530	United States	2.388-2.398
U.A.E. Dirham	8.78-8.85	3.6870-3.6900	Yugoslavia	70¼-73

Rate given for Argentina is free rate.

EMS EUROPEAN CURRENCY UNIT RATES

	ECU central rates	Currency amounts against ECU September 15	% change from central rate	% change adjusted for divergence	Divergence limit %
Belgian Franc	39.7897	40.5550	+1.92	+0.76	±1.53
Danish Krone	7.72336	7.81890	+1.24	+0.08	±1.64
German D-Mark	2.48208	2.52902	+1.89	+0.73	±1.125
French Franc	5.84700	5.87893	+0.51	−0.65	±1.3557
Dutch Guilder	2.74362	2.74810	+0.16	−1.00	±1.512
Irish Punt	0.668201	0.671405	+0.48	−0.68	±1.668
Italian Lira	1157.79	1202.90	+3.90	+2.83	±4.08

Changes are for ECU, therefore positive change denotes a weak currency. Adjustment calculated by Financial Times.

EXCHANGE CROSS RATES

Sept. 16	Pound Sterling	U.S. Dollar	Deutschem'k	Japan'se Yen	French Franc	Swiss Franc	Dutch Guild'	Italian Lira	Canada Dollar	Belgian Franc
Pound Sterling	1.	2.397	4.275	509.0	9.928	3.913	4.650	2033	2.791	68.60
U.S. Dollar	0.417	1.	1.783	212.6	4.142	1.632	1.940	847.8	1.164	28.03
Deutschemark	0.234	0.561	1.	119.2	2.323	0.916	1.088	475.4	0.653	16.05
Japanese Yen 1,000	1.965	4.705	8.391	1000.	19.48	7.678	9.127	3989.	5.477	134.6
French Franc 10	1.007	2.413	4.306	513.2	10.	3.941	4.684	2047.	2.811	69.10
Swiss Franc	0.256	0.613	1.093	130.2	2.537	1.	1.188	519.5	0.713	17.53
Dutch Guilder	0.215	0.513	0.918	109.0	2.135	0.841	1.	437.1	0.600	14.75
Italian Lira, 1,000	0.492	1.179	2.103	250.7	4.884	1.920	2.288	1000.	1.373	33.75
Canadian Dollar	0.358	0.858	1.532	182.0	3.558	1.403	1.666	728.4	1.	24.58
Belgian Franc 100	1.458	3.494	6.232	742.7	14.47	5.703	6.776	2963.	4.068	100.

FT LONDON INTERBANK FIXING (11.00 a.m. SEPTEMBER 15)

3 months U.S. dollars		6 months U.S. dollars	
bid 12	offer 12 1/8	bid 12 1/2	offer 12 5/8

The fixing rates are the arithmetic means, rounded to the nearest one-sixteenth, of the bid and offered rates for $10m quoted by the market to five reference banks at 11 am each working day. The banks are National Westminster Bank, Bank of Tokyo, Deutsche Bank, Banque Nationale de Paris, and Morgan Guaranty Trust.

EURO-CURRENCY INTEREST RATES (Market Closing Rates)

Sept. 15	Sterling	U.S. Dollar	Canadian Dollar	Dutch Guilder	Swiss Franc	West German Mark	French Franc	Italian Lira	Asian $	Japanese Yen
†Short term	16⅛-16¾	10¾-11	9-10	10¼-10⅝	3⅝-3⅞	8⅛-8¼	11¼-11½	14-16	10⅞-11⅛	11⅛-12
7 days' notice	16¾-17	11⅛-11⅝	9½-11	10⅛-10⅞	3-3½	8¼-8⅝	11¼-11½	15-18	10⅞-11	12⅛-12⅝
Month	16¼-16½	11⅞-12⅛	10-10⅜	10⅛-10⅝	3⅝-5¾	8⅜-8⅝	11⅝-11⅞	18½-20	12-12⅛	12¼-12¾
Three months	15⅞-16⅛	11⅞-12⅛	10⅛-10⅞	10⅝-10¾	5⅝-5¾	8⅛-8⅝	11⅞-12⅛	22-23	12⅛-12¼	11½-11¾
Six months	15-15¼	12⅜-12⅝	11⅛-11½	10⅝-10¾	5¾-5⅞	8⅜-8⅝	19¼-16⅛	24⅛-25⅛	12½-12⅝	10½-10¾
One Year	14⅛-14⅜	12⅛-12⅜	11⅝-12	10⅛-10⅜	5⅛-5⅝	8⅛-8¼	12⅛-18¾	23¼-24¼	12½-12⅝	9⅜-9⅞

Long-term Eurodollar two years 11$\frac{11}{16}$-11$\frac{13}{16}$ per cent; three years 11$\frac{15}{16}$-12$\frac{1}{16}$ per cent; four years 12$\frac{3}{16}$-12$\frac{5}{16}$ per cent; five years 12$\frac{5}{16}$-12$\frac{7}{16}$ per cent nominal closing rates. Short-term rates are call for sterling, U.S. dollars, Canadian dollars and Japanese yen; others two-days' notice. Asian rates are closing rates in Singapore.

The following nominal rates were quoted for London dollar certificates of deposit: one-month 11.10-11.30 per cent; three-months 11.90-12.00 per cent; six-months 12.15-12.25 per cent; one year 12.25-12.35 per cent.

INTERNATIONAL MONEY MARKET

German rates mixed

Call money was easier in the Frankfurt money market yesterday, despite seasonal tax payments, which are expected to lead to a tightening of conditions this week. Quarterly tax transfers will cause a severe drain on market liquidity, probably pushing call money above the present Lombard level of 9½ per cent, unless the Bundesbank intervenes to give assistance. Call money fell to 9.30-9.40 per cent from 9.35-9.55 per cent yesterday, with one month and three months funds steady at 9.15-9.25 per cent and 9.00-9.10 per cent respectively. Longer term rates were firmer, however, with six-month rising to 8.80-9.00 per cent from 8.75-8.80 per cent, and 12-month to 8.55-8.75 per cent from 8.45-8.65 per cent.

In Paris call money rose to 11½ per cent from 11¼ per cent due to a temporary shortage of funds, while trading was generally cautious in anticipation of news from the Organisation of Petroleum Exporting Countries meeting in Vienna. It was feared that higher oil prices may lead to pressure on the French franc and thus to higher interest rates.

Tokyo was closed for a public holiday, but short term rates are expected to increase this week as funds are required for monthly wage payments, while commercial banks are also due to build up reserves with the authorities. Last week conditions were easy at the start, but became tighter through company tax payments.

UK MONEY MARKET

Moderate shortage

Bank of England Minimum Lending Rate 16 per cent (from July 3, 1980)

Day-to-day credit was in short supply in the London money market yesterday, and the authorities gave moderate assistance by buying a small amount of Treasury bills and a small number of local authority bills from the discount houses, and by lending a small amount to five or six houses, overnight at Minimum Lending Rate.

The major factor against the market was a very large excess of revenue payments to the Exchequer over Government disbursements, and repayment of the small amount borrowed on Friday. On the other hand there was a small decline in the note circulation.

Discount houses paid up to 16 per cent for secured call loans, with some money taken at 15½-15¾ per cent.

GOLD

Weaker trend

Gold lost $18 an ounce in the London bullion market yesterday to $668-671. It opened at $675-$678, which was its best level of the day, but slipped to a low in the afternoon, soon after the entry of New York into the market, at $663-665. There was no easily identifiable reason for gold's decline, but selling developed soon after the opening of New York.

In Paris the 12½ kilo bar was fixed at FFr 89,000 per kilo ($667.59 per ounce) compared with FFr 88,600 ($664.83) in the morning, and FFr 90,440 ($679.54) on Friday afternoon.

In Frankfurt the 12½ kilo bar was fixed at DM 38,745 per kilo ($675.98 per ounce) against DM39,740 ($694.91) previously, and closed at $666-668 compared with $684-687 on Friday.

In Zurich gold finished at $671-674 against $685-688, with markets closing early for a holiday.

	Sept. 10		Sept. 12	
Gold Bullion (fine ounce)				
Close	$668-671	(£279-280½)	$686-689	(£284¼-285½)
Opening	$675-678	(£282¾-284¼)	$682-683	(£283¼-285)
Morning fixing	$672.50	(£280.070)	$693.50	(£287.104)
Afternoon fixing	$666.0	(£278.463)	$683.50	(£284.080)
Gold Coins				
Krugerrand	$669-681	(£283-286½)	$709-711	(£283½-286½)
Mapleleaf	$684-687	(£280-288)	$703-708	(£291½-294¼)
New Sovereigns	$170½-171½	(£71¼-79¼)	$174-173	(£72-73)
King Sovs	$196-202	(£83-84)	$200-203	(£83½-83½)
Victoria Sovs	$196-202	(£83-84)	$200-203	(£82½-83½)
French 20s	$167-170		$167½-170½	
50 pesos Mexico	$834-837		$847-850	
100 Cor. Austria	$660-663		$669-673	
$20 Eagles	$784-787		$790-793	
$10 Eagles	—		—	
$5 Eagles	—		—	

MONEY RATES

NEW YORK

Prime Rate	12½
Fed. Funds	11-11½
Treasury Bills (13-week)	10.64
Treasury Bills (26-week)	10.80

GERMANY

Discount Rate	7.50
Overnight Rate	9.35
One month	9.20
Three months	9.05
Six months	8.90

FRANCE

Discount Rate	9.6
Overnight Rate	11.5
One month	11.625
Three months	11.8125
Six months	11.875

JAPAN

Discount Rate	8.25
Call (Unconditional)	11.3125
Bills Discount (three-month)	11.46875

LONDON MONEY RATES

Sept. 15 1980	Sterling Certificate of deposit	Interbank	Local Authority deposits	Local Auth. negotiable bonds	Finance House Deposits	Company Deposits	Discount market deposits	Treasury Bills ♦	Eligible Bank Bills ♦	Fine Trade Bills ♦
Overnight	—	15¾-19	—	—	—	16¾-16⅞	15½-16	—	—	—
2 days notice	—	—	16⅛	—	—	—	—	—	—	—
7 days or	—	—	—	—	—	—	—	—	—	—
7 days notice	—	16⅛-16⅞	16½-16⅝	—	17	17-17⅛	15½-15⅝	—	—	—
One month	16⅝-16⅞	16½-16⅝	16⅜-16½	17¼-17⅝	17⅛	16¾-17	15¼-15⅝	14⅜-14⅞	16⅜	17
Two months	15⅛-15⅞	16-16⅛	—	17¼-17½	16⅞	—	14¾-15	14⅜-14⅞	15⅞-15¾	16⅜
Three months	15⅞-16⅛	15⅝-15⅞	16⅛-15¾	16¼-16½	16	16¼-16⅛	14¼-14½	14⅞-14⅜	15⅞-15⅞	16¾
Six months	14⅞-14½	14⅞-14⅞	14¾-14⅛	14⅝-15	16⅛	15⅜-16½	—	—	13⅞-13⅝	14⅝
Nine months	13⅞-13⅞	14-14⅛	—	14⅜-14¾	14½	16	—	—	—	—
One Year	13⅞-13⅞	13¾-13⅞	13⅞-14	13¾-14⅛	14⅛	14¾	—	—	—	—
Two years	—	—	13¾-13⅞	—	—	—	—	—	—	—

Local authority and finance houses seven days' notice, others seven days' fixed. Long-term local authority mortgage rates nominally three years 13¾-13⅞ per cent; four years 13¾ per cent; five years 13⅞-13⅞ per cent. ♦Bank bill rates in table are buying rates for prime paper. Buying rates for four-month bank bills 14$\frac{11}{16}$ per cent; four-month trade bills 15¾ per cent.

Approximate selling rate for one-month Treasury bills 14$\frac{5}{16}$ per cent; two-months 14$\frac{3}{16}$ per cent; three-months 14$\frac{3}{16}$-14$\frac{7}{32}$ per cent. Approximate selling rate for one-month bank bills 16½ per cent; two-months 15$\frac{5}{16}$-15⅝ per cent; three-months 14$\frac{15}{16}$ per cent; one-month trade bills 16¾ per cent; two-months 16⅛ per cent; and three-months 15½ per cent.

Finance Houses Base Rates (published by the Finance Houses Association) 16½ per cent from September 1, 1980. Clearing Bank Deposit Rates for sums at seven days' notice 14 per cent. Clearing Bank Rates for lending 16 per cent. Treasury Bills: Average tender rates of discount 14.4024 per cent.

WORLD VALUE OF THE POUND

The table below gives the latest available rate of exchange for the pound against various currencies on September 15, 1980. In some cases rates are nominal. Market rates are the average of buying and selling rates except where they are shown to be otherwise. In some cases market rates have been calculated from those of foreign currencies to which they are tied.

Abbreviations: (A) approximate rate, no direct quotation available; (F) free rate; (P) based on U.S. dollar parities and going sterling/dollar rates; (S) member of the sterling area other than Scheduled Territories; (T) tourist rate; (Bas) basic rate; (bg) buying rate; (Bk) bankers' rates; (cm) commercial rate; (ch) convertible rate; (fn) financial rates; (exC) exchange certificate rate; (k) Scheduled Territory; (nc) non-commercial rate; (nom) nominal; (o) official rate; (sg) selling rate.

PLACE AND LOCAL UNIT		VALUE OF £ STERLING
Afghanistan	Afghani	105.0
Albania	Lek	10.07
Algeria	Dinar	2.1750
Andorra	French Franc	8.9275
	Spanish Peseta	175.25
Angola	Kwenza	70.3506
Antigua (S)	E. Caribbean $	6.46
Argentina	Ar. Peso Free Rate	4,591.0
Australia (S)	Australian $	2.0425
Austria	Schilling	30.275
Azores	Portug. Escudo	112.10
Bahamas (S)	Ba. Dollar	2.3970
Bahrain (S)	Dinar	0.204
Balearic Isles	Spa. Peseta	175.85
Bangladesh (S)	Taka	36.05
Barbados (S)	Barbados $††	4.7940
Belgium	B. Franc	(cm) 68.60
		(fn) 68.00
Belize	B $	4.7940
Benin	C.F.A. Franc	496.375
Bermuda (S)	Bda $	2.3870
Bhutan	Indian Rupee	18.52
Bolivia	Bolivian Peso	52.85
Botswana (S)	Pula	1.8465
Brazil	Cruzeiro ‡‡	135.37
Brit. Virgin Isles (S)	U.S. $	2.3970
Brunei (S)	Brunei $	5.0695
Bulgaria	Lev	2.0364
Burma	Kyat	16.10
Burundi	Burundi Franc	213.546
Cameroon Republic	C.F.A. Franc	496.375
Canada	Canadian $	2.7905
Canary Islands	Spanish Peseta	175.85
Cape Verde Isle.	Cape V. Escudo	87.40
Cayman Islands (S)	Cay. Is. $	1.9976
Cent. Af. Repub.	C.F.A. Franc	496.373
Chad	C.F.A. Franc	496.375
Chile	C. Peso	(Bk) 93.21
China	Renminbi Yuan	3.5109
Colombia	C. Peso	(F) 116.46
Comoro Islands	C.F.A. Franc	496.373
Congo (Brazzaville)	C.F.A. Franc	496.373
Costa Rica	Colon	20.60
Cuba	Cuban Peso	1.6706
Cyprus (S)	Cyprus £	0.8315
Czechoslovakia	Koruna	(com) 12.65
		n/c 28.03
		(T) 21.01
Denmark	Danish Krone	13.203
Djibouti	Fr.	410 (sg)
Dominica (S)	E. Caribbean $	6.43
Dominican Repub.	Dominican Peso	2.3970
Ecuador	Sucre	(O) 36.94
		(F) 65.30
Egypt	Egyptian £	(U) 1.68
Equatorial Guinea	Ekpwele	175.23
Ethiopia	Ethiopian Birr	(P) 4.8650
Falkland Islands (S)	Falkland Is. £	1.0
Faroe Islands	Danish Krone	13.203
Fiji Islands	Fiji $	1.9030
Finland	Markka	8.71
France	French Franc	9.9273
French C'tyin Af*	C.F.A. Franc	496.375
French Guiana	Local Franc	9.9275
French Pacific Is.	C.F.P. Franc	174 (sg)
Gabon	C.F.A. Franc	496.373
Gambia (S)	Dalasi	4.0
Germany (East)	Ostmark	4.273
Germany (West)	Deutsche Mark	4.275
Ghana (S)	Cedi	6.63
Gibraltar (K)	Gibraltar £	1.0
Greece	Drachma	103.731

PLACE AND LOCAL UNIT		VALUE OF £ STERLING
Greenland	Danish Kroner	13.205
Grenada (S)	E. Caribbean $	6.45
Guadaloupe	Local Franc	9.9273
Guam	U.S. $	2.3970
Guatemala	Quetzal	2.3970
Guinea Republic	Syli	44.70
Guinea Bissau	Peso	78.70
Guyana (S)	Guyanese $	6.1125
Haiti	Gourde	12.00
Honduras Repub.	Lempira	4.8000
Hong Kong (S)	H.K. $	11.81
Hungary	Forint	(com) 76.3060
		(T)(nc) 54.7782
Iceland (S)	I. Krona	1,210.0
India (S)	Ind. Rupee	18.62
Indonesia	Rupiah	1,492.25
Iran	Rial	n/a
Iraq	Iraq Dinar	0.71115
Irish Republic (k)	Irish £	1.1340
Israel	Shekel	13.665
Italy	Lira	2,032.5
Ivory Coast	C.F.A. Franc	496.375
Jamaica (S)	Jamaica Dollar	4.2750
Japan	Yen	508.6
Jordan (S)	Jordan Dinar	0.703 (sg)
Kampuchea	Riel	2,276.4
Kenya (S)	Kenya Shilling	17.57
Kiribati	Australian $	2.0425
Korea (Nth)	Won	2.06 (ii)
Korea (Sth)	Won	1,466.60
Kuwait	Kuwait Dinar	0.652
Laos	Kip Pot Pol	38.30
Lebanon	Lebanese £	8.2065
Lesotho	Loti	1.80425
Liberia	Liberian $	2.3870
Libya	Libyan Dinar	0.7095
Liechtenstein	Swiss Franc	3.9125
Luxembourg	Lux Franc	68.60
Macao	Pataca	12.70
Madeira	Portug'se Escudo	118.10
Malagasy Republic	MG Franc	496.373
Malawi (S)	Kwacha	1.82
Malaysia (S)	Ringgit	5.0460
Maldive Islands (S)	Mal Rupee	8.4085
Mali Republic	Mali Franc	9.8275
Malta (S)	Maltese £	0.8160
Martinique	Local Franc	9.9270
Mauritania	Ouguiya	98.10
Mauritius (S)	M. Rupee	18.10
Mexico	Mexican Peso	54.83
Miquelon	C.F.A. Franc	496.370
Monaco	French Franc	9.9275
Mongolia	Tugrik	(o) 6.87 (ii)
Montserrat	E. Caribbean $	6.45
Morocco	Dirham	9.18 (sg)
Mozambique	Metical	67.55
Nauru	Australian Dollar	2.0425
Nepal	Nepalese Rupee	28.75
Netherlands	Guilder	4.65
Netherland Antilles	Antillian Guilder	4.2903
New Hebrides	See VANUATU	
New Zealand (S)	N. Z. Dollar	2.4310
Nicaragua	Cordoba	23.80
Niger Republic	C. F. A. Franc	496.375
Nigeria (S)	Naira	1.270648 (sg)
Norway	Norway Krone	11.5725
Oman Sultanate of (S)	Rial Omani	0.826
Pakistan	Pakistan Rupee	23.54
Panama	Balboa	2.3870
Papua N.Guinea (S)	Kina	1.5590
Paraguay	Guarani	301.0

PLACE AND LOCAL UNIT		VALUE OF £ STERLING
Peru	Sol	exc (A) 666.18
Philippines	Philippine Peso	17.50
Pitcairn Islands (S)	£ Sterling	—
	New Zealand $	2.4310
Poland	Zloty	(Cm) 72.86
		(T) 72.86
Portugal	Portugu'se Escudo	119.10
Puerto Rico	U.S. $	2.3970
Qatar (S)	Qatar Ryal	8.70
Reunion Ile de la	French Franc	9.9275
Romania	Leu	(Cm) 10.48
		(n/c) T28.13
Rwanda	Rwanda Franc	220.2
St. Christopher (S)	E. Caribbean $	6.45
St. Helena	St. Helena £	1.0
St. Lucia	E. Caribbean $	6.45
St. Pierre	Local Franc	9.9275
St. Vincent (S)	E. Caribbean $	6.45
Salvador El	Colon	5.98
Samoa American	U.S. $	2.3870
San Marino	Italian Lira	2,032.5
Sao Tome & Principe	Dobra	81.96
Saudi Arabia	Ryal	7.94
Senegal	C.F.A. Franc	496.375
Seychelles	S. Rupee	15.00 (sg)
Sierra Leone (S)	Leone	2.4950
Singapore (S)	Singapore $	5.0695
Solomon Islands (S)	Solomon Is. $	1.9290
Somali Republic	Somali Shilling	(A) 14.40
South Africa (S)	Rand	1.80425
South West African Territories (S)	S. A. Rand	1.80425
Spain	Peseta	175.25
Spanish ports in North Africa	Peseta	175.55
Sri Lanka (S)	S. L. Rupee	39.35
Sudan Republic	Sudan £ (1)	1.19
Sudan Republic	Sudan £ (2)	1.92
Surinam	S. Guilder	4.2905
Swaziland (S)	Lilangeni	1.80425
Sweden	S. Krona	9.933
Switzerland	Swiss Franc	3.9125
Syria	Syria £	(A) 9.3993
Taiwan	New Taiwan $	86.30
Tanzania (S)	Tan. Shilling	19.40
Thailand	Baht	48.65
Togo Republic	C.F.A. Franc	496.375
Tonga Islands (S)	Pa'anga	2.0425
Trinidad (S)	Trinidad & Tob. $	5.7550
Tunisia	Tunisian Dinar	0.960 (SG)
Turkey	Turkish Lira	191.0
Turks & Caicos	U.S. $	2.3870
Tuvalu	Australian $	2.0460
Uganda (S)	Uganda Shilling	17.37
United States	U.S. Dollar	2.3870
Uruguay	Uruguay Peso	(cm) 22.32
		(fn) 22.32
Utd. Arab Emirates	U.A.E. Dirham	8.82
U.S.S.R.	Rouble	1.5402
Upper Volta	C.F.A. Franc	496.375
Vanuatu	Franc	133 (SG)
	Aust. Dollar	2.0425
Vatican	Italian Lire	2,032.3
Venezuela	Bolivar	10.20
Vietnam	Dong	(O) 5.2180
		(T) 6.0530 (ii)
Virgin Islands U.S.	U.S. Dollar	2.3970
Western Samoa (S)	Samoan Tala	2.1065
Yemen (Nth)	Ryal	10.83 (SG)
Yemen (Sth)	S. Yemen Dinar	(A) 0.8173
Yugoslavia	New Y Dinar	60.5126
Zaire Republic	Zaire	6.953778
Zambia	Kwacha	1.86
Zimbabwe	Zimbabwe $	1.50

* That part of the French community in Africa formerly French West Africa or French Equatorial Africa. † Rupees per pound. ‡ General rates of oil and iron exports 100.65. **Rate is the transfer market (controlled). ††Rate is now based on 2 Barbados $ to the dollar. ‡‡New one official rate. (U) Unified rate. Applicable on all transactions except countries having a bilateral agreement with Egypt, and who are not members of IMF. (||) Based on gross rates against Russian rouble. (1) Official rates for government transactions and specified exports and imports. (2) Parallel rate for non-government transactions and non-specified exports and imports.

Kathryn Davies reports on Singapore's new economic policy

Industrial revolutionary

FOR A man who carries the weight of an industrial revolution on his shoulders, Mr. Goh Chok-tong is remarkably urbane and seemingly untroubled. Singapore's 39-year-old Minister of Trade and Industry was catapulted into the limelight in March last year, when he was given many responsibilities formerly belonging to the Finance Ministry. Despite his personal denial that he is the sole architect of Singapore's new economic policy—"that would imply that I's superman" Mr. Goh is identified in the public eye as the man who must either drag or lead Singapore "forward and upward." to quote Mr. Lee Kuan Yew, the Prime Minister.

The goal is a restructured economy, eliminating as far as possible unskilled labour-intensive industries and encouraging greater mechanisation, more sophisticated capital investment and increased skills amoog the local workforce.

The most controversial aspect of the policy is the imposition of greatly increased pay rates for employees in both the private and public sectors. The National Wages Council, which recommends annual wage increases, has the Government's blessing for its three-year campaign for ihgher wages: It began last year with increases of about 20 per cent. The second round—published in June—is expected to add 19 per cent to the country's wages bill.

Another dose of strong medicine is still to come, and some employers have protested that they are being doubly squeezed —by the need to invest in plant and equipment and by having to implement the pay guidelines. Mr. Goh admits that profits are being squeezed, although ndt, he says, to the point at which businesses are no longer viable.

An important psrt of the wage policy is to correct the conservatism of recent years. Wages in countries seen as competitors—Hong Kong, Taiwan and South Korea—rose more rapidly in the late 1970s than those in Singapore. "By suppressing wages they have fallen below what would have been achieved by msrket forces. As a result we now hsve an over-use of labour," says Mr. Goh.

Mr. Goh gives equal emphasis to other aspects of his economic strategy: fiscal incentives to persusde employers to mechanise, Intensive skills training for manpower, and a wage structure to encourage greater productivity. He says it is too early to tell whether the policy is working, but there are indications that it is having the desired effect.

"The demand for labour as measured by jobs created has dropped sharply," he says. Productivity has also improved—with an additiooal 3 per cent salary increase svailable for better workers under this year's wage guidelines.

Mr. Goh's background as an economic planner — he has s first-class economic degree from Singapore University and an MA in development economics from Williams College in the U.S.—makes him a good candidate for his present portfolio. But like other recently appointed Ministers, Mr. Goh is a relative newcomer to politics and lscks the experience of Prime Minister Lee and his colleagues on the bustings

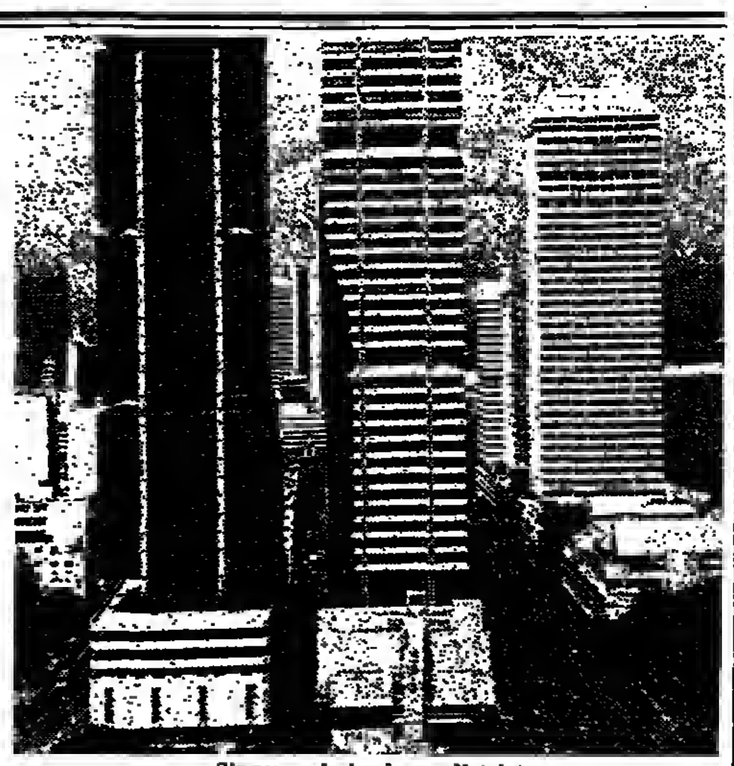
"We are technocrsts who try to learn to become politicians," says Mr. Goh, whose public speeches lack the charisma he shows in privste conversation. As long as things go well, this does not really matter. But there could be problems, as Mr. Goh admits.

The wage increases could have an inflationary impact on the domestic economy, leading to unacceptably high prices. Singapore workers may become complscent, and already seem reluctant to work unsocial hours. High international interest rates — beyond Singapore's control — could make the financing of capital eqoipment too expensive for many companies. Another energy crisis could throw everybody's calculations out of the window.

But Mr. Goh is reasonably confident that Singapore can weather the worst effects of the recession. "I do not have a crystal ball and I cannot tell you what the imponderables are. But there are certain bssic steps that we can take to secure for ourselves a brighter future, and we have begun taking these steps — training of manpower, measures to improve productivity growth, diversifying sources of energy, energy conservation, export promotion and ensuring that our political stability continues.

"We are targeting to grow at 8 per cent per annum in this decade. Barring any major political or economic disorder in the world, we have a fair chsnce of attsining out target."

Mr. Gob accepts his identification with the success or failure of the economic policy with humour and resignation. "If the policy succeeds then I shall remain in politics." (He is tipped as a future Prime Minister.) "If it fails then of course I shall go down with it —that's as clear as daylight."



Singapore's business district

Confidence that exports will win the day

"WE DO not expect the recession to hurt us—yet," says Mr. Haider Sithawalla, general manager of ACMA Electrical Industries, a Singapore company which exports refrigerators and air-conditioners to 38 countries from its base on the Jurong Industrial Estate.

Mr. Sithawalla's cautious optimism typifies the current mood in Singapore, seemingly justified in the latest half-yearly economic indicators presented by Prime Minister Le Kusn Yew in his nstional day message last month. Net manufacturing investment commitments were up 57 per cent in the first six months of this year to a total of S$1,180m (£231m), with non-petroleum projects increasing by 83 per cent to S$979m, industrial production up 13.5 per cent and GDP up 10.7 per cent in real terms.

Singspore's confidence is boosted by the knowledge that its admirable export performance ensured that the effects of the 1974-75 recession were minimal, even though a slight loss of nerve by the Government in encouraging too many labour-intensive industries in the city state acted as a temporary brake on the drive for greater economic sophistication.

In 1974 ACMA was a small electrical company msking refrigerators for the local market under technical licensing arrangements with Japanese and American manufacturers. Multinationals, then as now, played the dominant role in Singapore's foreign trade. Their worldwide marketing networks helped to insulate the Republic from some of the protectionist measures applied to its neighbours.

ACMA had virtually saturated the obviously limited demand for its product in a population of 2.3m. It disliked its dependence on licensing and believed there wss an overseas demand for "no frost" refrigerators of less thao 15 cubic feet capacity which would avoid direct competition with U.S. manufacturers.

In January 1977 ACMA's new plant began production with an eight-fold increase in capscity, making refrigerators entirely for export. Since 1978 exports have virtually doubled each year. ACMA now sells to almost 40 countries in the Middle East, Africa, Australia and the Pacific islands, as well as to its South East Asian neighbours.

Last year's group turnover of S$70m represented a 30 per cent increase over the previous year, pre-tax profits leapt by 40 per cent to S$4.6m and earnings sfter tax per share increased by 29.7 per cent from 19.5 cents to 25.3 cents.

Although a small company in international terms, ACMA claims to be one of the largest refrigerator exporters in the world. It sells between 65 to 70 per cent of its ontput abroad, a higher proportion thsn companies in either the U.S. or Japan. Expansion plans include the setting up of a joint venture in Indonesia, in which ACMA will hold a 40 per cent equity, to produce both air-conditioners and refrigerators.

What Singapore companies like ACMA fear more than any recession is their own Government's progressive dismantling of the few remaining import tariffs which have hitherto protected local manufacturers.

"Contrary to some beliefs, the local entrepreneur is not an endangered species," said Minister of Trade and Industry Mr. Goh Chok-Tong in his budget speech in March. But the Government will not protect Singsporeans against competition either, leading to anguished cries from some manufacturers as they contemplate their rising costs while yet more multinationals are invited to set up shop in Singapore.

"We cannot sell in Japan," says Mr. Sithawalla simply. But big household names like Hitachi, Mitsubishi and Sanyo compete for the tiny local market as well as manufacturing their goods for export. Not that Mr. Sithawalla is against the multinationals.

"I think for Singapore they are a good thing, in terms of snpply of components and transfer of technology," he says. "But wbst we feel is that although the local market may seem small, for certain industries it can be significant."

ACMA too suffers from Singapore's tight labour market and uncertainties over whether it can find enough employees to match its planned expansion, both of existing foreign markets and new ones. The rising cost of oil-based raw materials—particularly plastics—is another worry. In this context, the recession stilll seems remote. "So far we have not found any slackening of demand," says Mr. Sithawalla.

CONTRACTS

£2m nuclear engineering

A contract from Sweden valued at more than £2m, for the design, supply, installatioo and commissioning of plant to convert two existing steam boilers from oil to coal/oil firing has been placed with the burner division of **PEABODY HOLMES**. The contract was placed by the Vasteras Municipal Anthority. The boilers to be converted are used for power generation and district heating.

★

METAL AND PIPELINE ENDURANCE has won a two-year contract to provide inspection and quality-assurance services at the Nigg Bay site of Brown and Root-Wimpey Highland Fabricators. Worth about £1.2m, the contract is managed by MAPEL's office at Nigg Bay. It entails the supply of the skilled engineers and equipment needed to help Highland Fabricators carry out inspection, ultrasonic testing, radiographic examination, and magnetic particle inspection of the jacket structure for the BP Magnus Field, the biggest oil platform ordered so far for the North Sea.

★

A contract worth over £400,000 for valves to be used in a major mains replacement project by Trinidad's Water and Sewerage Authority has been won by **EUROVALVE**, the UK-based joint production venture of the British Steel Corporation and Pont-a-Mousson SA of France. The contract was obtained by the company's agent, Century Eslon, Port of Spain.

★

FERRANTI COMPUTER SYSTEMS has received a £130,000 order from the British Steel Corporation, for an Argus 700G compnter system to replace an Argus 500 system at the BSC Scunthorpe heavy section mill, finishing end.

★

Courage (Western) has placed a major contract with **ERBEN** for the Bristol Brewery. The project involves the reorganisation of the cask handling section at Bath Street, replacing plant to give beter utilisation of space and increasiog operating flexibility.

★

A Davy company in the U.S. has been awarded a contract for a 200m galloos per year methanol plant by Arco Chemical Company, a division of Atlantic Richfield Company. The plant, said to be one of the largest in the world, is to be built at Channelview, Texas, and completion of the project is scheduled for early 1983. The contract has beeo awarded to **DAVY MCKEE CORPORATION**, the main U.S. subsidiary of Davy Corporation of Loodoo.

★

STOTHERT AND PITT, Bath, has a contract worth £1½m for the supply and installation of a 40-tonne container handling crane at the Greenwich terminal of Victoria Deep Water Terminal. The container crane, due to be in service next spring, is of the wide span type for ship loading and unloading and for the marshalling of cootainers within its 48-metre rail span.

★

The moderoisation of yeast production at the Glenochil factory of The Distillers Compaoy at Menstrie, Clackmannanshire, involves a £500,000 contract for computer- and microprocessor-based control systems, together with field equipment using electronic transmission, all to be supplied by **FOXBORO YOXALL** of Redhill, Surrey.

WORLD STOCK MARKETS

Dow off 5.9 at mid-session

WORRIES ABOUT inflation and interest rates caused Wall Street to retreat in fairly active trading yesterday morning.

The Dow Jones Industrial Average receded 5.89 to 930.63 at 1 pm, while the NYSE All Common Index lost 42 cents to $72.23 and declining issues outpaced advances by a two-to-one ratio. Trading volume slowed to 28.82m shares from last Friday's substantial 1 pm figure of 35.21m.

Expectations of oil price increases from the OPEC meeting in Vienna and an apparently reviving U.S. economy heightened inflation fears, analysts said. Commerce department economist Courtenay Slater on Friday said the recession is over.

A resurgence of inflation could force the Federal Reserve to tighten credit further, especially in view of money supply growth.

Precious Metal and Multinational Oil issues were weak, but Domestic Oils and companies involved in alternative energy sources, such as coal and gasohol, were stronger.

Among the actives, volume leader **Texaco** fell 1¼ to $35¾, but **Quaker State Oil Refining** gained ⅛ to $18⅞, **Archer-Daniels-Midland**, a gasohol manufacturer, ⅜ to $36 and **Bucyrus-Erie**, a coal mining machinery producer, ⅞ to $23⅛.

Santa Fe Industries gained 3½ to $64, but **Southern Pacific** eased ⅛ to $37⅞. The two companies have ended merger talks.

Active **Sony** hardened ⅛ to $14⅛ and **Matsushita Electric**, a major Sony competitor, rose ⅞ to $36⅛.

General Motors gained ⅜ to $56⅜. The company reported early-September car sales down 13.4 per cent, but **Ford Motor**, which said sales fell 36.3 per cent in the period, lost ⅛ to $29⅞.

THE AMERICAN SE Market Value Index relinquished 2.83 to 338.52 at 1 pm on volume of 3.15m shares (4.67m).

Closing prices for North America were not available for this edition.

Oil and Mining shares were mostly weaker.

Volume leader **Goldfield** slipped ⅛ to $3⅛, **Atlas Mining "B"** ⅜ to $6, **Houston Oil** 1½ to $36¾ and **Inter-City Gas** ¼ to $21⅜. **Wainoco Oil** receded 2⅛ to $35⅞. It plans to offer 1.38m shares. However, **Petro-Lewis** advanced 1½ to $34⅛.

Canada

Markets in Canada also adopted an easier tendency early yesterday, although business remained active. The Toronto Composite index declined 16.7 to 2,321.1 at mid-day, while Golds fell 306.1 to 5,952.2, Oil and Gas 51.6 to 4,727.9 and Metals and Minerals 35.0 to 2,419.4, but Utilities gained 1.36 to 272.53 and Banks 0.48 to 384.45.

Gold issues followed Bullion prices sharply lower. **Dome Mines** plunged 8¼ to C$143¼, **Campbell Red Lake** C$3 to C$87, **Camflo Mines** C$2 to C$45 and **Kerr Addison** 1½ to C$21.

Among other Minings, **Cominco** fell 1¼ to C$71¾, **Falconbridge Nickel** C$1 to C$139 and **Noranda** ⅜ to C$30⅛.

Australia

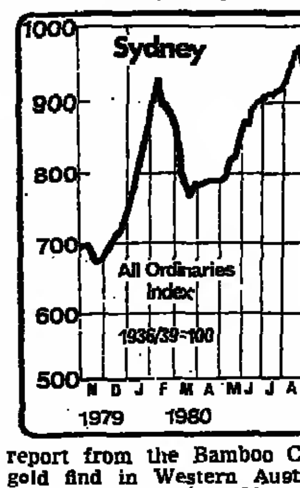
Continuing demand for gold situations and some other leading Minings and news of a promising oil strike in the Cooper Basin pushed the Sydney stock market to a record level despite slack overseas interest and easing gold prices. The Sydney All Ordinaries index moved ahead 10.70 to an all-time high of 786.14, while the Metals and Minerals sub-group index advanced 121.50 to 6,497.01.

Cooper Basin explorers **Santos** and **Vamgas** rose 90 cents to A$13.90 and 80 cents to A$6.80 respectively following an announcement that the Dullangari No. 8 well flowed oil at a rate of over 2,000 barrels a day.

Elsewhere in Oils, **Woodside** gained 12 cents to A$3.20, **Weeks Petroleum** 30 cents to A$8.50 and **Hartogen** 10 cents to A$6.30, while **BHP**, which has oil drilling interests, climbed 50 cents to A$15.85.

Peko-Wallsend's Tennant Creek gold find continued to attract buyers to the stock, which finished 45 cents stronger at a year's peak of A$10.80.

Traders expecting a major



report from the Bamboo Creek gold find in Western Australia pushed **Kitchener** 90 cents higher to A$5.90, while major shareholder, **Mogul**, put on A-1.00 to A$6.20 and project partner, **CRA**, added 20 cents to A$6.50.

Elsewhere in Minings, **MIM** jumped 30 cents to A$6.00 and **Western Mining** 28 cents to A$6.18, while Coal issue **Utah** advanced 18 cents to A$5.60, but *Hamersely receded 17 cents* to A$4.23 and **Bougainville** 7 cents to A$2.48.

Singapore

Stock prices moved broadly higher in active trading, lifting the Straits Times Industrial Index 9.44 more to a record 624.26.

Industrials, Properties and Banks mainly improved, although Plantations were mixed.

News that Government-owned **Keppel Shipyard** is to offer 30m shares to the public at S$3.30 a share, thereby offering a price-earnings ratio below that of **Sembawang Shipyard**, did not unsettle Sembawgang, which advanced 20 cents to S$4.66. The new listing will bring more interest in the sector, a broker said. Rather than take Sembawang down, the difference in P-E ratios is likely to lead *Keppel* up, he added.

Hong Kong

With the market taking as generally bullish the half-yearly review on the local economy by *Financial Secretary Philip Haddon-Cave*, shares generally made fresh headway yesterday in further heavy dealings, but late profit-taking eroded some of the gains. The Hang Seng index added 10.38 at 1,230.73.

Germany

Bourse prices were inclined to drift lower in an exceptionally quiet market made hesitant by rising domestic interest rates. The Commerzbank index slipped 1.8 to 716.4.

Chemicals, Banks, Stores and Machine Manufacturers showed the clearest downward trend, although declines among the majors rarely exceeded DM 2.

Significant exceptions included **Degussa**, off DM 4, and **KHD**, down DM 2.50.

Deutsche Bank shed DM 1.30, but **BMW** improved DM 1.50 and Steels concerns **Thyssen** and **Krupp** put on DM 1 and DM 2 respectively.

Tokyo

The market was closed yesterday for a public holiday, Respect of the Aged day.

In Saturday's half-day session, stock prices mainly moved higher in another active trade, the Nikkei-Dow Jones Average climbing 17.58 to an all-time peak of 7,017.62. The Tokyo SE index added 2.41 at 485.75, while turnover amounted to 280m shares, against last Friday's full-session total of 440m.

Johannesburg

Gold shares tended easier in quiet dealings with the Bullion price. Heavyweights Randfontein and Harties lost 150 and 200 cents respectively at R103.00 and R104.00. The General Mining group of gold companies also declined despite higher dividends.

$235m takeover by General Electric

BY PAUL BETTS IN NEW YORK

GENERAL ELECTRIC (GE), the leading U.S. electrical equipment and electronics group, has taken another major step in its current efforts to expand its operations in the semiconductor field.

The group is to buy for about $235m Intersil, a Californian manufacturer of integrated circuits with sales of $140m last year.

GE and Intersil announced at the week-end that they had signed an agreement in principle whereby the Californian semiconductor manufacturer would become a wholly-owned subsidiary of GE which will pay $35 for each of Intersil's outstanding 6.7m shares.

GE said a key element in the proposed merger was Intersil's advanced technology in integrated circuit design, process and manufacturing, thus reflecting further GE's intentions to strengthen its presence in the microchip market.

Although GE pulled out of the integrated circuit market about ten years ago, the largest U.S. electrical equipment manufacturer is now attempting to correct what is generally regarded as having been a strategic error by investing heavily in this expanding electronics sector.

Like other major U.S. conglomerates, GE is seeking to build up its in-house capabilities in this sector, not only to ensure itself with adequate supplies, but also to guarantee the company the specialised custom-designed equipment which the large volume producers in this field are increasingly unwilling to manufacture.

GE's latest drive in the electronics business has been eloquently reflected in a series of other moves to expand its activities in this sector.

Excluding the latest deal with Intersil, GE in recent months has committed more than $150m in new electronics manufacturing and development facilities.

Last month, it announced a $31.3m expansion of its industrial electronics facilities at Charlottesville in Virginia, while the week before it said it planned to build a new micro-electronics centre at North Carolina's Research Triangle Park with an initial investment of $55m which could grow to more than $100m over the next five years.

Earlier, GE announced a $50m expansion of its corporate research and development centre at Schenectady, New York, of which more than half is to be devoted to building a modern electronics laboratory for electronic materials research and semi-conductor processing.

The company has indicated that by the mid-1980s the electronic content in GE's diversified product line would affect about two-thirds of its overall sales.

Rockwell may sell business jets division

By Ian Hargreaves in New York

ROCKWELL International, the Pittsburgh-based manufacturer of motor and aerospace components, is considering the sale of a division which makes turbo-prop business jets.

The company said yesterday that it was holding discussions with "several U.S. companies" about possible sale of the Oklahoma-based division, which is currently producing 11 Commander aircraft per month.

The division employs 900 people and claims 12 per cent of the U.S. market for turbo-prop business aircraft and 28 per cent of the medium size bracket, where it competes most strongly. Rockwell said yesterday that it intended to step up production to 13 units per month early in 1981.

Mr. Bastian Hello, head of Rockwell's aviation interests, also said that the company would only contemplate selling its general aviation division if the buyer undertook to maintain current product development plans. The division is about to unveil a third type in the Commander range.

Aerospace, of which the general aviation division is a part, accounted for 26 per cent of the company's 1979 sales total of $6.2bn. Among Rockwell's aerospace activities is its role as main contract for the Space Shuttle programme.

Technologies suit terminated

By Our Financial Staff

THE JUSTICE DEPARTMENT has filed a proposed consent decree to end its anti-trust suit against United Technologies.

The suit sought to block United's acquisition of about 50 per cent of Carrier, a leading manufacturer of heating and air conditioner systems.

The proposed decree would require United, for a reasonable fee, to grant a licence to anyone making an application for any patent, for the related know-how necessary to practise the patent

Ruling on Trustco offer near

BY ROBERT GIBBENS IN MONTREAL

THE ONTARIO Supreme Court yesterday was expected to rule on a request by Royal Trustco, Canada's largest trust company, for an order halting a C$413m (US$356m) bid by Campeau Corporation, the real estate development group.

The C$21 a share bid for Royal Trustco common and C$29.93 for the preferred expires this Friday. Campeau is controlled by Mr. Robert Campeau, an Ottawa construction and real estate millionaire who says he wants a minimum 54 per cent of Royal Trustco as an investment.

Royal Trustco was seeking an order restraining Campeau from going ahead on the grounds that insufficient information had been provided in the bid circular, that it was illegal and non-enforceable, and that acceptance by more than 25 per cent of Royal Trustco shareholders would breach U.S. law and lead to forced divesting of Trustco's bank subsidiaries in Florida.

For the past 10 years Trustco has been building up its banking interests in Florida, which has a large Canadian population. It owns seven Florida bank subsidiaries.

Late last week, the Florida Department of Banking issued a cease-and-desist order against Campeau, saying it was illegal for anyone to acquire control of a Florida state-chartered bank without obtaining approval of the state banking authorities. The department said that Campeau had not filed an application for approval. Five of the seven Florida banks owned by Trustco are state-chartered.

Meanwhile, the Ontario Securities Commission yesterday opened public hearings on an agreement under which Campeau would buy a 5.4 per cent interest in Trustco from a Toronto real estate holding company, Unicorp Financial, in exchange for Campeau convertible preferred. The issue is whether this agreement forms part of the Campeau takeover bid for Trustco, and if so, whether the same offer should not be extended to all other Trustco shareholders.

Tosco pays $140m for refinery

BY OUR FINANCIAL STAFF

SUN COMPANY, the U.S. oil group which acquired Seagram Company's U.S. oil and gas interests for $2.3bn, has agreed to sell a refinery to Tosco Corporation for $140m.

The 48,500 barrel per day refinery, at Duncan, Oklahoma, will boost the capacity of Tosco, the second largest independent refiner in the U.S., by about 23 per cent to 261,500 barrels per day.

Tosco said the refinery could process heavy, sour crudes and therefore fitted in well with its policy of concentrating on less desirable, more plentiful crudes.

The acquisition is also intended to enhance the company's ability to go-ahead with oil shale development plans.

Tosco has a 40 per cent interest in the Colony oil shale project in Colorado. Tosco said yesterday it expected to apply for a Federal loan guarantee to assist in the construction of its share of the project. Exxon, which holds the remaining 60 per cent of the project, has estimated its spending on the project at $1bn.

The Duncan refinery represents less than 10 per cent of Sun's U.S. refining capacity. It said the sale was consistent with its objective of reallocating assets to give emphasis to primary energy resource development and, in its refining operations, to giving emphasis to lubricants and petrochemicals while consolidating its fuels business.

Sun, which includes the Athabasca tar sands oil extraction project in its interests, bought reserves estimated at 120m barrels of oil and 200bn cubic feet of gas in the takeover from Seagram of Texas Pacific Oil Company. It also gained extensive unexplored areas in the U.S.

Overseas expansion by Huffy

BY TERRY BYLAND

HUFFY CORPORATION, the leading U.S. bicycle manufacturer, claimed yesterday in London that its production of 3.8m units last year had made it the world leader.

The company announced a $10m convertible subordinated guaranteed debenture at the weekend. It will be issued by its newly formed subsidiary Huffy International N.V. The issue coincides with a major sortie into export markets by Huffy which does not at present sell any unit outside the U.S.

In May, the group increased its production potential by one third to 4m units with the opening of a new manufacturing plant in Oklahoma.

Mr. H. Shaw, president and chief operating officer, said in London yesterday that the company was in the process of setting up sales links overseas but that tariff barriers were a major problem.

In fiscal 1980, Huffy earned $8.9m or $2.20 a share on sales of $237.5m.

Franco German tyre merger called off

By Our Financial Staff

PLANS FOR Continental Gummi Werke, the West German tyre group, to acquire a controlling shareholding in Kleber-Colombes, the loss-making French tyre company, have fallen through.

In a terse statement, Continental Gummi gave no reasons for its decision to pull out of the deal which would have created a major cross-frontier tyre group with 26 manufacturing plants and an annual turnover of around $2.2bn.

"In order to protect the interests of both companies and in view of the competitive situation in the European rubber industry no further comments will be given," the German company declared.

When announced in June this year, the deal was to have involved Continental Gummi in the purchase of Michelin's major shareholding in Kleber.

This stake plus shares owned by interests close to Michelin, which is the largest tyre group in France, would have given Continental Gummi around 64 per cent of Kleber at a price of around FFr 97m ($24m).

Both Continental Gummi and Kleber have been involved in re-organisation of the European tyre industry in recent years. In the middle of 1979, the German group acquired the European operations of Uniroyal, the troubled U.S. tyre maker.

First sterling Eurobond for French bank

By Francis Ghilès

THE FIRST sterling-denominated Eurobond for a French bank, Banque Nationale de Paris, was awaiting its launch last night through a group of banks led by Morgan Grenfell, BNP and Kleinwort Benson. The amount of this 10½ year issue is £15m and the indicated coupon 13½.

The bonds, which should be priced at par, are redeemable at the borrower's option from 1986.

Most seasoned sterling-denominated bonds were steady yesterday, though some issues eased slightly on news of the new issue.

Sterling convertible Eurobonds, meanwhile, continue to attract strong support. The 8 per cent Kollmorgen bond to 1995 was trading at 108-109 while the 8 per cent Orient Finance paper was quoted at 113-114.

In the dollar sector, the new increase in U.S. money supply combined with a weak New York bond market to depress seasoned issues, particularly at the shorter end of the maturity spectrum.

A new issue is being arranged in this sector, a $20m 15-year private placement for the EEC, which carries a coupon of 13 per cent, through Hill Samuel. This "bought" deal is being placed with four other banks, aside from the lead manager: BNP Banque Internationale a Luxembourg, Bayerische Landesbank and the Midland Bank Group.

Investors will benefit from a ten-year call protection on the notes which will be priced at par. Proceeds of the issue are earmarked for project lending under the terms of the Ortoli facility.

Bond prices in the hard currency sectors were also under pressure. The DM 150m public bond issue for the Republic of Austria was priced at 99½ by the lead manager, Dresdner Bank, instead of the indicated price of par. If the 1¼ per cent selling group commission is taken into account, investors get a yield of 8.57 per cent. Despite this, the bonds fell to a more than one point discount from their issue price during the first hours of trading yesterday afternoon.

Only two months ago, the same borrower was able to raise money in this sector on a yield slightly below 8 per cent. Since then, yields on prime names have climbed by more than 50 basis points.

Svenska Handelsbanken is to raise $20m through an issue of floating rate certificates of deposits in Singapore, believed to be the first such issue in that market by a non-resident bank.

Terms provide for interest to be paid at a margin of ⅛ per cent over six-month Singapore interbank rates for U.S. dollars. The three-year issue is priced at par and lead-managed by Nordic Bank's Singapore branch.

Mexican bank seeks $300m

By Our Euromarkets Staff

MEXICO'S Banco Nacional de Comercio Exterior has awarded a mandate to Intermex to raise $300m for seven years on terms that mark a further softening of conditions for Mexican state borrowers.

The credit, a bullet which will be repaid in full at maturity instead of in instalments during the life of the loan, bears a margin of only ⅝ per cent over Libor. Recent public sector Mexican credits have carried split ⅝-⅞ per cent margins.

BORROWER PROFILE — NICARAGUA

Happy ending in sight

International banks seem likely to accept the terms negotiated with the Sandinista Government on Nicaragua's public debt. William Chislett in Mexico City and Peter Montagnon in London report.

THE Drawn out renegotiation of Nicaragua's foreign debt seems to be heading for a happy end. While it is too early to arrive at any specific consensus, initial reactions to the rescheduling proposals sent 10 days ago to about 120 international banks are understood to have been positive. Several banks have indicated they will accept the proposals and none has yet turned them down.

The proposals, agreed in principle between the Sandinista Government and a steering committee of 13 major banks, cover $582m of Nicaraguan public sector debt contracted before the downfall of the Somoza regime in July 1979. The debt is to be rescheduled over a period of 12 years at an initial margin of 1 per cent above Libor rising in stages to 1¾ per cent. A five-year grace period is included.

Consolidated into the $582m is unpaid interest between July 1979 and the end of this year calculated on the basis of a ¾ per cent margin over Libor.

While the agreement has been circulated to a very large number of banks, it does already, of course, have the endorsement of the 13 members of the steering committee which together hold 52 per cent of the total claims.

One member bank, Citibank, has claims amounting to $56m, or nearly 10 per cent of the total set for rescheduling. The other members of the steering committee are: Bank of America, Bankers Trust, Deutsch - Südamerikanische, First Chicago, Lloyds Bank International, Manufacturers Hanover, Merban Corporation, Merrill Lynch, Royal Bank of Canada, Sanwa Bank, Swiss Bank Corporation and Wells Fargo.

For these creditors a very important facet of the agreement is that it involves rescheduling at commercial rates. If this is a source of satisfaction to the banks, some might argue that it represents a defeat for Nicaragua, which had been holding out for substantially softer terms and at one stage wanted to reschedule the debt until 2003.

Bankers close to the agreement argue strongly, however, that it is in Nicaragua's own best interest to accept commercial rates. As it stands the agreement is already a small first step towards paving the way for a resumption of international lending to Nicaragua. Once the country demonstrates its ability to meet the conditions of the agreement, new short-term trade financing could become available very quickly.

A crucial test in this respect for Nicaragua will be whether it can meet the first payment of $20m in interest, which is due under the agreement on December 15.

The banks feel that further financial assistance will be essential for Nicaragua to revitalise its war-ravaged economy. The country essentially is rich in natural resources and has a large untapped economic potential, especially in agriculture.

But the economy was shattered by the fighting, which took the lives of 35,000 out of a population of 2.5m. Gross national product fell 37 per cent last year. Hardcore unemployment is estimated at 28 per cent of the workforce.

When former President Anastasio Somoza left in July 1979, foreign exchange reserves were down to only $3.5m. Now they have recovered somewhat. According to Sr. Alfredo Alaniz, the central bank president, reserves stood at $144m in June, but the country is expecting a current account deficit of $249m this year after a surplus of $65m in 1979.

The steering committee did attempt to take account of these factors in negotiating the agreement. Interest payments are to be made on a flexible basis to avoid placing undue burdens on the country's limited foreign exchange cash-flow.

Some bankers, however, would welcome renewed involvement of the International Monetary Fund in Nicaragua. The fund has been kept at arms length by the Sandinista regime, partly because of bitter memories associated with a fund credit of $67.5m granted to the country only a few weeks before Somoza fell. The credit was construed in some quarters as IMF support for his regime.

Nicaragua is not receiving any balance of payments support from the IMF but it has kept up to date with quota payments to the fund.

Meanwhile, not all the country's foreign debt is covered by the agreement. Still to be resolved is what happens to loans contracted by companies formerly in the hands of General Somoza himself, and which have now been nationalised. The same applies to loans contracted by Nicaraguan banks nationalised by the Sandinistas, and those by other private companies.

The U.S. investment banking firm, Leslie Weinert and Co., financial advisers to Nicaragua, estimates that these three categories together account for a further $200m-$250m in foreign debt. Discussions on this debt are due to take place soon.

They will take place in an environment that is now considerably more relaxed than two or three months ago when many bankers doubted that any satisfactory solution to the country's debt problems was possible.

One banker close to the present agreement described it as being one in which there are no winners and no losers.

Reaching this commitment has involved concessions from both sides, always within a framework of what is commercially viable. Doubtless the Nicaraguan experience thus provides a lesson that will be drawn on in future if other Third World debtors also reach the brink of default.

FT INTERNATIONAL BOND SERVICE

The list shows the 200 latest international bond issues for which an adequate secondary market exists. *For further details of these or other bonds see the complete list of Eurobond prices published on the second Monday of each month.*

Closing prices on September 15

U.S. DOLLAR STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Brit. Oxygen F. 10¼ 90	50	84⅞	85⅜	−0½	−0⅜	13.56
CECA 11½ 88	100	94⅞	95⅜	−0⅜	−0⅜	12.49
Citicorp O/S Fin. 10 88	300	90½	91	−0⅜	−0⅛	12.30
Con. Illinois O/S 9¾ 88	150	89	89½	−0⅛	0	12.44
Denmark 11⅛ 90	100	92¾	93⅜	−0⅛	−0½	13.03
Dome Petroleum 13½ 92	50	101	101½	−0½	+0⅛	13.25
EEC 11 95	75	87⅜	87⅞	−0½	−0⅜	12.90
EEC 11 95	70	87⅝	88⅛	−0½	−0¼	12.88
EIB 11¾ 92	80	90⅞	91⅜	−0⅜	−0⅜	13.26
EIB 13¾ 90	100	102⅜	103⅛	−0⅜	−0½	13.17
Eksportfinans 11⅜ 87	50	95	95½	−0⅛	−0⅜	12.34
Eksportfinans 8½ 87	75	86⅞	87⅜	−0⅛	+0⅜	12.38
Elec. de France 10 88	125	88⅜	88⅞	−0⅛	0	12.33
Export Dv. Cpn. 12¾ 87	100	100½	100⅝	−1½	−1½	12.62
Export. Dv. Cpn. 8½ 86	150	90	90½	−0¼	0	12.05
Federal Dev. Bk. 12¼ 85	75	100½	101	+0¼	+0⅛	11.99
Fin. Exp. Credit 10⅛ 85	50	92¾	93⅜	−0⅛	+0¼	12.50
Finland Rep. of 9½ 86	100	87⅛	87⅝	−0⅜	−0½	12.80
Ford O/S Fin. 12⅝ 85	250	97⅜	97⅞	−0⅜	−0½	13.29
George Weston 13½ 87	30	99⅜	99⅞	−0⅜	−0⅜	13.55
GMAC O/S Fin. 11 84	100	95⅝	96⅛	−0⅛	−0⅜	12.26
GMAC O/S Fin. 13⅜ 85	100	102⅜	103⅛	−0⅛	−0⅜	12.46
Goodyear O/S 12½ 87	75	97½	98	−0⅛	−0¼	12.99
Hudson's Bay 11½ 90	75	93	93½	−0⅛	+0¼	12.72
IBM Canada 10⅛ 85	50	95	95½	−0½	−0⅛	11.83
ICI Fin. Ned. 11 83	100	97¼	97¾	−0⅜	−0¼	12.08
Int. Harvester 12¾ 85	115	98⅛	98⅝	−0⅛	−0⅛	13.20
McGraw 13½ 85	75	99⅝	100⅛	−0⅛	−0¼	13.48
NorWest Ind. 13⅝ 87	50	99½	100	−0⅜	−0⅜	13.64
Nova Scotia 10¾ 90	50	91⅜	91⅞	−0⅛	−0⅜	12.25
OKB 10 85	50	92⅜	92⅞	−0⅛	−1	12.03
Pembroke Capital 9⅝ 87	100	†87½	88	−0⅜	−0¼	12.37
Pemex 11½ 88	100	92⅜	92⅞	−0⅜	−0¼	13.04
Quebec Hydro 11⅛ 92	100	91½	92	−0⅜	+0⅛	12.88
Repsteel O/S 11½ 88	100	87⅜	87⅞	−0⅛	−0⅝	14.20
Rovlease Ltd. 11⅛ 85	50	96⅛	96⅝	−0⅛	0	12.23
SNCF 12⅛ 85	50	100⅝	100⅞	−0⅛	−0⅜	12.15
Swed. Ex. Cred. 12½ 85	40	†98¾	99⅜	−2⅛	−2⅜	12.75
U/S Finance BV 11 90	50	88½	89	0	−0⅛	13.08
Unilever NV 8¾ 90	100	84½	84⅝	−2⅛	−0¼	12.59
World Bank 8¾ 85	200	91⅛	91¾	−0½	0	12.16
World Bank 10¾ 87	300	91⅜	91⅞	−0⅛	−0⅛	12.17

Average price changes... On day −0½ on week −0⅜

DEUTSCHE MARK STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Akzo 8 90	125	100½	101¼	−0⅜	−1⅜	8.85
Australia 8½ 90	250	100⅝	101⅜	0	+0⅛	7.98
BFCE 7¾ 87	100	97	97¾	−0⅜	−1¼	8.28
BFCE 8⅞ 95	100	97¾	98½	−0⅛	−1½	8.35
Brazil 8 87	150	88½	88⅜	−0⅜	−1½	10.33
Council of Eur. 7¾ 88	100	93¾	94½	+0⅛	−0⅛	8.22
Denmark 7⅞ 86	100	98	98¾	−0⅛	−0½	8.24
Denmark 8⅞ 92	100	98	99¼	−0⅜	−0⅛	8.33
EEC 7⅞ 94	225	95⅜	96⅛	−0⅞	−0⅞	8.33
Finland Rep. of 8 86	150	98½	98⅞	−0⅜	−0½	8.30
Iberduero SA 8 90	100	99¾	98⅞	−0¼	0	8.07
Kobe, City of 7¾ 89	150	93⅝	94⅝	−0⅛	−0⅛	8.08
Kobe, City of 8 90	100	99½	100	−0⅜	−0¼	8.03
Mt. Bk. Denmark 8½ 90	150	98⅝	99⅜	−0⅛	−0⅜	8.65
Norway 7¼ 88	250	98¾	99½	−0¼	−0⅜	7.73
OKB 7¾ 88	100	94½	95¼	−0½	−0⅛	8.20
OKB 8¾ 92	150	98⅝	99⅜	−0⅜	−0⅞	8.38
Oslo, City of 8¾ 90	90	102⅛	102⅜	−0⅜	−0½	8.36
Sweden 9¾ 87	200	106⅝	106⅞	−0⅞	−0⅛	8.50
World Bank 8 90	700	97½	98¼	−0⅛	−0¼	8.32
World Bank 8⅞ 90	250	98	98½	−0⅜	−1⅜	8.46
World Bank 10 86	150	106⅝	107⅜	+0⅛	−0¼	8.37
World Bank 10 90	200	109⅜	109⅞	−0⅛	−0½	8.50

Average price changes... On day −0⅛ on week −0⅜

SWISS FRANC STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Austria Rep. of 5¾ 90	100	*98	98½	+0¼	−0½	5.61
Bergen, City of 4¾ 91	40	*†91½	92	−0⅛	−1⅛	5.79
Bergen, City of 6 90	50	*102	102½	0	−0⅛	5.98
BMW Overseas 4¾ 91	100	*90½	91	+0⅜	−0⅛	5.38
Buhrm'n-Tetterode 7 90	40	*104¾	105¾	+0¼	+0⅛	6.29
Caisse Nat. Tels 4⅜ 89	100	*92⅞	93⅛	−0¼	0	5.36
Copenhagen 4½ 91	60	*85¾	98⅛	−0⅛	−1⅜	6.30
Council of Eur 5 89	100	*95	95½	+0½	−0⅛	5.68
Denmark 5¾ 90	90	*99⅛	98⅞	−0⅛	−0½	5.80
EIB 4¼ 94	100	*84½	85	+0¼	−0⅝	6.02
Elec. de France 4¾ 88	100	*93¾	92¾	0	−0⅞	5.31
F G H Hypo. Bk. 6 90	50	*†102¾	103¾	0	0	5.59
Finland Rep. of 5¾ 90	80	*94	94½	0	−0⅞	8.42
GZB 4⅞ 85	100	*86½	87	+0⅜	−2⅛	6.20
Hilti 4½ 91	35	*†91	92	−0½	−1¼	5.28
Int.-Amer. Dev. 4½ 88	100	*91½	92	+0⅝	0	5.77
Int.-Amer. Dev. 7 90	80	*105½	106	+0⅛	+0⅛	5.18
Jutland Tele. 5½ 90	50	*98½	98	+0⅜	+0¼	5.67
Malaysia 5 88	80	*†88	98	+0⅛	−0¼	8.73
Newag 5¾ 90	80	*101⅛	101⅞	+0¼	−0⅜	5.53
Nippon Tel. & T. 4¾ 88	100	*†93½	94	+0⅞	−0⅞	6.12
Norges Komm. 4⅜ 91	100	*87¾	88¾	−0¼	−1⅞	6.98
OKB 4⅜ 91	100	*†88½	89	−0⅜	−0½	5.78
OKB 5 90	100	*103⅛	103⅝	+0⅛	−0⅜	5.50
Oslo, City of 4⅛ 91	100	*87½	88	+0¼	−1⅛	5.91
Philips Lamps 5¼ 92	100	*99¾	99¾	+0⅛	−0⅛	5.31
Sekisui Pre. Hms. 5 90	80	*103⅛	103⅜	0	−0¼	5.54
Shikoku El. Pwr. 4¾ 89	100	*93¼	93¾	−0½	−0⅝	5.70
World Bank 4⅜ 89	160	*†88½	89	−0⅛	−1⅜	8.03
World Bank 4⅝ 91	100	*88⅛	88⅝	−0⅛	−1¼	6.00

Average price changes... On day +0¼ on week −0⅜

YEN STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Australia 5.6 83	30	91⅜	92⅛	0	0	8.71
Australia 6½ 88	20	87¾	88⅜	0	−0⅛	8.69
EIB 7¾ 89	12	96⅝	97⅝	+0⅛	−0⅛	8.21
Finland 5.6 83	10	91	92	0	0	8.82
Finland 6.8 88	10	87⅞	88⅜	0	+0¼	9.00
Finland, Rep. of 8⅜ 87	15	97¾	98½	0	+0¼	8.79

Average price changes On day 0 on week 0

OTHER STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Bell Canada 10⅝ 88 C$	60	92½	93¼	−0⅛	−0¼	12.49
CIBC 13½ 85 C$	90	99⅞	100⅜	0	−0½	13.41
CIBC 11½ 85 C$	60	95⅝	96⅛	+0⅛	−0⅜	12.63
Federal Dev. 11½ 90 C$	60	89⅛	89⅞	−0½	−0⅜	13.47
Fst. Can. Inv 10 84 C$	50	90⅝	91⅞	−0¼	−0⅛	13.11
GMAC 12 85 C$	90	†95⅜	96⅛	0	−1⅜	13.22
R. Bk. Canada 10 86 C$	40	91⅛	91⅝	0	−⅜	12.13
Tordom Cpn. 13½ 86 C$	30	99½	100¼	−0½	−0¼	13.48
M. Bk. Dnmk. 9 91 EUA	25	94	95⅛	0	+0¼	9.80
SOFTE 8¾ 89 EUA	40	88¾	90	+0⅛	+0¼	10.15
U. Bk. Nrwy 9¼ 90 EUA	38	99¾	100½	0	−0½	9.50
Algemene Bk. 8¾ 84 Fl	75	95½	96	0	−0¾	9.58
Algemene Bk. 10¼ 87 Fl	400	99⅜	99⅞	−0⅛	−0⅛	10.31
Bk. Mees & H. 10 85 Fl	75	99⅝	100⅛	0	−1¼	9.99
Heineken NV 10 87 Fl	75	99⅝	100½	+0⅛	−0⅜	10.01
Norway 8¾ 84 Fl	100	98	96½	0	−0½	9.40
Philips Lamps 8¾ 84 Fl	75	95⅞	96⅜	+0⅛	0	9.63
Aero Paris 13½ 87 FFr	150	99⅝	100⅝	+0⅛	0	13.08
Air France 11 84 FFr	120	96	97	−0⅞	−0⅛	12.10
CECA 14¾ 86 FFr	150	104⅞	105⅞	−0½	−0⅛	12.78
Finland 11 84 FFr	80	93¾	94½	+0⅛	0	12.92
Finland 11½ 89 FFr	70	92½	93½	−0⅛	−0⅛	12.84
Gaz de France 11 84 FFr	150	94⅞	95⅞	−0⅛	−0⅛	12.48
IBM France 11⅞ 84 FFr	120	95	96	−0⅛	−0⅛	13.27
Renault 9¾ 85 FFr	100	87¾	88¼	−0¼	−0½	13.17
Solvay et Cie 9¾ 87 FFr	125	84⅛	85⅝	−0⅜	−0⅛	13.30
Utd. Mex Sts. 14 95 FFr	150	100⅝	101⅝	+0⅛	0	13.61
Beneficial Fin. 14¼ 90 £	20	98⅝	99⅜	−0⅛	−0⅛	14.41
Citicorp O/S 13½ 90 £	50	98⅛	98⅞	−0⅛	−0⅛	13.73
EIB 11½ 91 £	25	89½	90¼	0	+1⅜	13.30
Fin. for Ind. 12½ 89 £	30	94⅝	95⅜	−0⅜	−0⅛	13.48
Fin. for Ind. 14½ 88 £	20	101⅜	101¾	−0¼	−0⅛	14.11
Gen. Elec. Co. 12½ 89 £	50	95⅞	96⅛	0	−0⅛	13.25
Peugeot SA 14 90 £	23	97¾	98½	−0⅛	−1½	14.35
Rothschild 14¼ 90 £	12	98½	99¼	−0⅛	−0⅛	14.46
Swed. Ex. Cr. 15¾ 85 £	20	102¾	103½	0	+0¼	14.20
Banobras 8¼ 90 KD	7	†93	93½	0	0	8.33
CCCE 8⅛ 91 KD	10	†94	94½	0	0	8.98
Sonatrach 8½ 90 KD	12	†92	92½	0	0	9.77
Akzo 9¼ 87 LuxFr	500	93½	94⅝	0	+0½	10.55
Euratom 8 87 LuxFr	500	87⅞	89⅞	0	0	10.53
Euratom 8¾ 88 LuxFr	500	87	88	0	0	10.23
EIB 9¾ 88 LuxFr	500	97⅞	98⅞	0	0	10.05
Volvo 8¾ 87 LuxFr	500	96	97	−0½	+0⅛	10.45

FLOATING RATE NOTES	Spread	Bid	Offer	C.dte	C.cpn	C.yld
Allied Irish Bk. 5¼ 87	0¼	98	98½	2/1	10.44	10.62
Bank of Ireland 5⅞ 89	‡0¼	97¾	98¼	21/11	11⅜	11.61
Bank of Tokyo 5¼ 88	‡0¼	97	97½	25/10	9¼	9.51
Barclays O/S Inv. 5 90	0¼	97½	98	13/12	9⅝	9.85
Bergen Bk. A/S 6 89	‡0¼	97½	98	29/11	12¼	12.53
Bilbao Int. NV 5¾ 90	‡0¼	96⅝	97⅛	29/11	10.06	10.37
Citicorp O/S F. 83	§‡0	99⅛	99⅜	23/11	11.44	11.49
Citicorp O/S F. 84	‡0	98⅝	99⅛	30/9	11.94	12.06
C. Itoh 5¼ 87	0¼	99⅜	99⅞	18/9	19.44	19.51
Co-operative Bk. 6 88	0¼	98⅜	98⅝	16/11	11.44	11.63
Creditanstalt 5⅛ 81	§‡0¼	97⅞	98½	14/9	8.44	8.62
CNT 5¼ 86	§0¼	100	100⅛	16/10	18½	18.08
GZB 5½ 89	‡0¼	98½	99	1/11	8.81	8.94
Jugobanka 8 89	0⅞	91⅛	93¼	23/11	11⅛	12.60
Ind. Bank Japan 5¼ 87	0¼	99⅜	99⅞	15/10	18¼	18.62
Lloyds Eurofin 8 [illegible]	0¼	96½	87	3/1	15⅝	16.28
LTCB Japan 5¼ 86	0¼	98⅜	98⅞	13/12	8⅝	8.76
LTCB Japan 5½ 88	0¼	97⅞	98⅜	7/12	10⅛	10.32
Mfrs. Han. O/S 5¼ 94	‡0¼	97⅝	98⅜	30/11	12⅛	12.39
Midland Intl. Fin. 5 89	0¼	97½	98	25/1	9.69	9.91
Midland Intl. Fin. 5¼ 92	0¼	97¾	98¼	5/12	10⅞	11.10
Nacional Fin. 6¼ 86	0⅜	97½	98	25/11	8.69	8.91
Nat West 5¼ 94	§0¼	98	99½	11/10	18⅛	18.77
Nippon Credit 6½ 88	0½	97½	98	12/1	9.56	9.78
Nippon Credit 5¾ 87	‡0¼	98⅛	98¾	8/11	10⅞	11.04
Royal Bk. Scot. 5¼ 94	§‡0¼	98⅜	99⅛	11/10	8.31	8.42
Soc. C. de Bque. 6½ 87	0¼	98⅝	99⅛	3/10	20.06	20.29
Standard Chart. 5¼ 90	0¼	99½	100	6/9	17¼	17.29
Svenska Hndlsbk. 5 87	0¼	98	98½	15/1	10	10.19
Sweden 91	‡0¼	96⅛	96⅞	15/10	9.56	9.91
Williams & Glyn 5¼ 91	0⅛	98⅝	99⅛	14/9	18½	18.71
Bq. B. d'Alg. 4⅞ 89 SF	0⅛	*†89	90	18/12	6½	6.84

Average price changes... On day 0 on week +0⅜

CONVERTIBLE BONDS	Cnv. date	Cnv. price	Bid	Offer	Chg. day	Prem
AGA Aktbolag 7⅞ 89	10/79	145	†116	117	−2	−7.46
Ajinomoto 7¼ 95	2/80	615.6	123⅜	124⅜	+0⅛	−2.56
Alco Int. Fin. 9½ 94	1/80	40	93	94½	−0¼	13.48
Apache I. Fin. 8¾ 95	12/80	21.12	137	138½	+6¼	−4.59
Blocker Energy 8¾ 95	1/81	21.87	107½	109	−0⅛	−4.82
Canon 6¾ 84	8/79	570	116⅞	117⅞	+2	2.83
Credit Suisse 4¾ 93	10/79	1278	113¾	115¼	−0⅝	3.27
Daiei Inc. 6½ 94	11/79	827.3	97⅛	98¾	−0½	20.05
DDKK 11 60	4/80	324	105⅞	106⅞	+0⅞	12.50
Dynalectron 9⅛ 95	8/80	12.22	110¼	112¼	−3½	1.83
Ensearch Fin. 9½ 94	7/80	30.26	198	138¾	+4⅞	0.06
INA Overseas 8⅞ 2000	4/81	42	98	99	−0⅝	4.73
Inchcape Ltd. 8 95	2/81	4.55	107¾	108¾	[illegible]	0.04
Maidensha Elec. 7 94	12/79	210	110½	111⅜	+2⅛	−1.76
MEPC 8¾ 88	2/81	2.47	111	112	−0⅛	6.72
Mitsubishi Cp. 6½ 94	10/79	549.1	132¼	134¼	+0⅛	−0.57
Ricoh 6⅛ 95	8/80	604	102⅞	103⅞	+0⅜	−2.73
SBC 6⅜ 90	9/80	200	100	101	−0½	4.39
Toshiba Cpn. 7⅜ 94	10/79	198	110⅜	111⅜	+0¼	−1.84
Union Bk. Switz. 5 89	2/80	121.4	98½	99½	−0¼	0.53
Fujitsu 6 84 DM	7/79	475	114½	115¾	+3	0.28
Sharp Corp. 6½ 88 DM	9/80	595	109⅛	110⅛	+0¼	0.09
Uny Co. 6½ 85 DM	11/79	1071	97⅛	97⅝	+0⅞	21.83

* No information available—previous day's price.
† Only one market maker supplied a price.

Straight Bonds: The yield is the yield to redemption of the mid-price; the amount issued is in millions of currency units except for Yen bonds where it is in billions. Change on week=Change over price a week earlier.

Floating Rate Notes: Denominated in dollars unless otherwise indicated. Coupon shown is minimum. C.dte=Date next coupon becomes effective. Spread=Margin above six-month offered rate (‡ three-month; § above mean rate) for U.S. dollars. *C.cpn=The current coupon.* C.yld=The current yield.

Convertible Bonds: Denominated in dollars unless otherwise indicated. Chg. day=Change on day. Cnv. date=First date for conversion into shares. Cnv. price=Nominal amount of bond per share expressed in currency of share at conversion rate fixed at issue. Prem=Percentage premium of the current effective price of acquiring shares via the bond over the most recent price of the shares.

INTERNATIONAL INVESTMENT

ITT and ASEA reduce South Africa holdings

BY QUENTIN PEEL IN JOHANNESBURG

INTERNATIONAL Telephone and Telegraph (ITT) has sold its full 33 per cent equity holding in Allied Technologies (Altech), the South African electronics manufacturer, for R37m ($48.8m), it was announced last night.

The announcement was made by Altech and Allied Electronics (Altron), the holding company which already owns 52 per cent of Altech.

Although the sharea were initially offered to Altron, they have been privately placed with a number of South African financial institutions.

The announcement follows the news that ASEA, the Swedish electrical equipment manufacturer, has reduced its holding in ASEA Electric, South Africa to less than 25 per cent.

The sale has heen in the offing since July, when it was announced that ITT had offered Altron the option to huy its stake in the company. The 33 per cent interest was acquired by ITT (UK), the ITT subsidiary in Britain, in 1977, when Altech took over STC'a South African operations in a share exchange. No price was given in Johannesburg for the sale of the 2.8m ITT shares, although the sale value of R37m indicates that it was at a considerable discount on the latest trading price for Altech shares of 1,620 cents a share.

It is understood that ITT has heen granted no special dispensation by the South African Reserve Bank to take its money out of the country at the commercial rand rate. If it needs the cash elsewhere, the company will have to suffer a substantial discount, on the financial rand market, currently some 35 per cent.

However, part of the sale proceeds is expected to be paid in the form of a dividend, which can he repatriated at the commercial rate.

Although Altron had the option to take up the entire ITT stake, it has bought only 400,000 shares, raising its stake in Altech to 56 per cent.

Altron is planning its own rights issue of one ordinary share for every 10 held, it was said yesterday.

Nicholas Colchester in London adds: Mr. Ted Newman, vice-president and treasurer of ITT (UK) which holds the Altech stake, explained yesterday that ITT's prime motive in selling the shares was its general corporate plan to reduce debt by divesting non-mainstream activities or ones in which ITT does not have management control. He noted that ITT had recently announced a number of such sales aimed at improving its debt-equity ratio.

Mr. Newman said that there was no disenchantment at ITT with Altech which had developed well since STC's South African operations had been merged into it in 1977—leaving ITT with its 33 per cent stake—but he conceded that general pressure to disengage from South Africa had played a part in ITT's decision to sell out entirely. Originally the plan had been for ITT to preserve a 5 per cent stake in Altech. but ITT had since decided this was pointless, he said.

ITT will preserve its trading links with Altech, including the licensing, technical information and non-competition agreements between the two companies. The U.S. company will retain a South African consumer products operation and its Alfred Teves motor components business.

In South Africa, ASEA, whose controlling interest in ASEA Electric South Africa is the largest single Swedish investment in South Africa, reduced its holding in a R10.9m ($14.3m deal with Anglo American Industrial Corporation (AMIC). It has sold an 18.8 per cent stake, to reduce its interest to 24.9 per cent.

The deal is designed to give ASEA the maximum amount of cash outside South Africa, while AMIC, which has acquired a further 13.1 per cent of the shares from other minorities, becomes the dominant shareholder in the South African company, with 31.9 per cent.

ASEA is the latest, and largest, of a number of Swedish companies to run down their investments in South Africa since the Swedish Government decided in 1978 to ban any new investment in that country.

Minority shareholders in ASEA Electric have been offered three options by AMIC:

- Redemption of their entire shareholding at 505 cents a share;
- Receipt of a 170 cents a share dividend, and redemption of 43 out of every 100 shares held at 110 cents a share;
- Retention of their shares.

The shares were trading in the market yesterday around R530.

The second option is the one designed specifically for the Swedish parent company, for it allows it to take the maximum amount out of South Africa in dividends, at the commercial rand rate of $1.32 to the Rand, and the minimum as capital, which has to go through the financial rand market, at a discount of some 35 per cent.

Bahrain lifts curbs on share issues

BY MARY FRINGS

THREE OFFSHORE companies being set up to operate from Bahrain under the Exempt Company regulations have been given permission to offer shares for public subscription in the Gulf.

The Bahrain Monetary Agency and the Ministry of Commerce imposed a ban on public share floats for Exempt Companies (ECs) last October, after a U.S.$25m issue by Gulf Investment Company was 1,263 times subscribed. Two earlier issues, by Pearl (Lulna) Investment Company and Golf Union Insurance Company were also the focus of what the BMA described as undesirable speculation. Local banks made unprecedented windfall profits on the lending facilities made available to share applicants.

Exempt Companies, of which there are now over 50 in Bahrain, including six hanks, are not required to have a controlling local interest — or any local participation at all — although they enjoy the tax advantages of being incorporated in Bahrain. But they are not permitted to compete in the local market, and in the case of public joint stock companies, Bahraini companies and citizens may not apply for shares on public offer, although they may participate as founders.

The four locally incorporated commercial banks — National Bank of Bahrain, Bank of Bahrain and Kuwait. Al Ahli Commercial Bank and Bahrain Islamic Bank—began accepting applications for shares in the Arab Iron and Steel Company on September 6, hut activity is reported to be at a low level. AISC, which plans to build a $300m iron pelletisation plant close to Bahrain's Asry dry dock, has an authorised capital of $150m, of which $80m has been issued.

The second issue, scheduled to start later this month, is for the Arab International Insurance Company, promoted by a Gulf-backed development company also registered as an EC. Financial institutions have traditionally found it easy to attract private funds in the Gulf, and the fact that Arab International Insurance Company is seeking additional share capital of only $2.5m augurs well for the issue's success.

The last issue in the present series is due to start in October. It is for the $100m Consolidated Gulf Service and Industry Company, the objectives of which include general contracting, engineering, and the administration of ports and hospitals.

Losses mount at El Al

By L. Daniel in Tel Aviv

EL AL ISREAL Airlines, the national carrier, incurred a loss of $99m in the 1979-80 financial year, compared with a loss of $24m in the preceding 12 months. However, only 60 per cent of the loss arose from operations, since $28m was set aside for severance pay—the company is reducing its staff—and a further $11m was spent on reorganising the airline.

As part of the latter operation, El Al last week sold two Boeing 720B jets to the Californian Jet Power Corporation for $500m each. They are to be replaced hy two Boeing 737s at the beginning of October. The company is still seeking buyers for eight of its 707s and for two of its seven 747s.

Profit rise for Bank Hapoalim

By Our Tel Aviv Correspondent

BANK HAPOALIM, Israel'a second largest hanking group, reports that its net consolidated profit in the first half of 1980 rose by 198 per cent, compared with the same period in 1979, to reach I£1.9bn, thus exceeding the rate of inflation by a substantial margin. In dollar terms, the increase was 52 per cent to I£38.2m.

The hank's consolidated halance sheet as of June 30 amounted to I£711.7bn ($14.3bn), representing a rise of 143.6 per cent in Israeli currency terms, and of 23.3 per cent in dollars on the year.

Equity capital equalled $282.6m, a figure which does not take into account the I£2.5bn ($50m) stock issue in July, or the floating rate note issue of $50m offered by Hapoalim International. The Israeli pound figures were translated for this half-year's results at the rate of I£49.68 to the dollar prevailing on June 30, and those for the first half of 1979 at I£25.245.

OTB shows advance

By Our Hong Kong Correspondent

OVERSEAS TRUST BANK has reported after-tax profits for the year to June 30 of HK$ 39.34m (U.S.$ 7.9m), or 42 per cent more than the HK$ 27.67m the previous year. For the whole group, which includes property interests and financial service companies, profits rose 55 per cent to HK$ 55.72m.

The final dividend was set at 14 cents a share.

CGE to regroup in computers

BY DAVID WHITE IN PARIS

THE EXTENT of French ambitions in electronics has become more clear with the announcement of a strategic regrouping of computer-related interests helonging to the country's leading electrical group, Compagnie Generale d'Electricite (CGE).

The new line-up, which follows the takeover of Roneo Vickers' office equipment busines earlier this year, is part of a plan designed to concentrate new investment in this sector, where sales are expected to increase by 35 per cent a year over the next three years.

The plan was announced by Mr. Georges Pebereau, number two in the CGE management, ahead of the SICOB computer, telecommunications and office machine fair in Paris.

All the group's activities in private communications, mailing computer systems and computer peripherals and services are to he brought together under Compagnie Generale d'Electrique, a subsidiary which is controlled through the CIT-Alcatel Telecommunications hranch and which will be renamed Alcatel Electronique.

Part of the idea is to build up the Alcatel trademark to compete against the big names in the sector such as Xerox and International Business Machines.

The French authorities have clearly played a guiding role in the latest moves, which create a second major "pole" in the French computer electronics husiness. The reorganisation coincides with a shareholding change at Cii Honeywell Bull, the Franco-U.S. computer company, bringing it under the influence of the diversified Saint-Gobain-Pont-a-Mousson group. Under the deal Saint-Gobain has thrown in its shareholding of more than 20 per cent in Italy's Olivetti. This is expected to provide the basis for new projects in office equipment.

CGE decided to sell its 10 per cent shareholding in Cii Honeywell Bull last year in order to concentrate on developing its own interests in the same sector. M. Pebereau said he helieved the two "poles"—CGE and Saint-Gohain — would be largely complementary.

Although CIT has established a leading world market position in digital exchanges, public telecommunications will this year account for no more than 40 per cent of sales by this side of the group.

COMMODITIES AND AGRICULTURE

New threat to Atlantic salmon

By Our Commodities Staff

ATLANTIC SALMON could face a new threat if Britain's 12-mile fishing limit is opened to other countries—as is planned from December 1982. This warning is given today by the Atlantic Salmon Trust in a new booklet, *Atlantic Salmon Facts*.

Until December 1982, EEC member States are entitled to restrict the exploitation of fishing stocks within 12 miles of their shores, but after that date "in principle States must open to all member States equal conditions of access to and use of fishing grounds within the 12-mile limits," says the trust.

It points out that the salmon producing countries, Britain France and Ireland, are in a minority within the EEC. Yet the EEC Commission now negotiates all international fishery agreements on behalf of members. The Community also includes Denmark which is responsible for the Greenland Salmon Fishery, which the trust considers is not sufficiently controlled.

It points out that the catch quota for this fishery is 1,190 tonnes a year, equivalent to more than 300,000 salmon, but in 1979 the quota was exceeded by 17 per cent. Three times as many females are caught as males in the fishery.

"Atlantic Salmon Facts" was produced to provide answers to the most commonly asked facts about the fish. How salmon navigate, details of their life cycle and travels, figures of annual catches, the rising value of salmon are among the facts given. The booklet is obtainable from The Atlantic Salmon Trust, 14 Downing Street, Farnham, Surrey GU9 7PB.

Israeli grapefruit exports start

PICKING of early grapefruit has started in Israel and the first vessel with 50,000-60,000 cases is due to leave for Marseilles later this week.

It is expected that the coming (1980-81) season's fruit exports will rise to between 49m and 50m cases, compared with 45m cases worth \$250m in 1979-80 when the crop was reduced by adverse weather conditions.

However, the cases to be used now will be about 5 per cent smaller than those used last year so that the increase in quantity will be of the order of 5 per cent to 6 per cent.

Gold decline hits base metals

BY JOHN EDWARDS, COMMODITIES EDITOR

THE DECLINE in gold prices brought a generally easier tone on the London metal markets yesterday. Dealers on the London Metal Exchange commented that fundamental supply-demand factors were virtually ignored as the markets followed the trend in gold.

Silver staged a rally, in line with a slight recovery in gold during late trading but still ended lower. The bullion market spot quotation was cut by 72p to 824.5p a troy ounce at the morning fixing, but the market rallied in later trading to close just over 850p. Meanwhile in New York the Commodity Exchange (Comex) announced it was raising margin requirements for speculators by \$1,000 to \$8,500 per contract because of increased volatility in the market.

Copper led a decline in base metals. Cash wirebars closed £15.25 lower at £861.75 a tonne as a result of selling influenced by the fall in gold.

It was claimed that selling both by the trade and speculators was encouraged by the failure of the three months quotation to stay above the £900 mark breached Friday.

The downtrend was accelerated by a Reuter report from New York quoting a Phelps Dodge spokesman as saying considerable progress had been made in weekend talks aimed at settling the 11-week old strike by U.S. copper workers.

Copper stocks held in LME warehouses fell by 75 tonnes last week reducing total holdings to 119,900 tonnes, in spite of market predictions of a stocks rise.

There were huge rises in aluminium and lead stocks, but these had little impact on market prices since they had already been discounted to a large extent. Lead stocks were up by 9,525 tonnes raising total holdings to 63,225 tonnes, while aluminium stocks jumped by 9,850 to 33,500 tonnes. Tin stocks also rose by a hefty 640 tonnes to 4,345 tonnes, and zinc by 675 to 61,375 tonnes. Nickel stocks fell by 180 to 4,890 tonnes, while LME silver holdings declined by 210,000 to 26,060,000 oz.

Optimism at coffee pact talks

BY OUR COMMODITIES EDITOR

TALKS AIMED at regulating the coffee market, through rejuventating the International Coffee Agreement, started in London yesterday in an optimistic note. Octavio Rainho, Brazilian Coffee Institute president, gave a strong hint in a speech, released yesterday in Rio de Janeiro, that producers were prepared to abandon unilateral market support measures in favour of reaching agreement with consumers on export quotas linked to "trigger" price levels.

Sr. Rainho said that while conscious of the risks involved, Brazil felt it could not rely solely on the activities of Pancafé (the producer support buying group) on the world market.

He claimed that a coffee export policy orientated basically toward maintaining high prices to the detriment of sales volume was extremely unadvisable.

The U.S. has made it plain that no agreement can be reached on regulating the world coffee market until the producers stop attempting to "manipulate" prices through co-ordinated action, such as Pancafé. It is believed the producers enthusiasm for the support buying policy has evaporated with the failure of Pancafé, which is believed to have suffered heavy losses, to prevent a slide in world market values to the lowest level for four years.

However there is likely to be considerable disagreement at the London talks over the "trigger" price levels at which quotas would be activated and the individual quotas assigned to each country.

Purchase hopes boost sugar

By Our Commodities Staff

STRONG rumours of Soviet and other international sugar purchases brought early rises on the London terminal market yesterday, but prices then lost ground before rallying later. Mixed selling partly related to a lower gold price was cited by traders, but in the afternoon news of New York's steady demand and continued reports of purchases helped the rally.

In New York world sugar futures rose by the 1.00 cent per pound permissible limit for the third session in a row, also sparked by the talk of large purchases by importing countries.

Dealers said that Soviet buying would be logical because of the delayed domestic harvest and the poor Cuban crop, but they could not confirm sales. Normally the Soviet Union does not buy from the world market until November or December. Market talk suggests that Soviet purchases could be about 1m tonnes for the coming year.

Besides the rumours of Soviet purchases, there were also reports of sales to China, East Europe, India, Indonesia and Venezuela. But the flurry of genuine and rumoured imported demand for physical sugar caused some dealers to be wary in case it reflected a need to explain the sharp rises in world prices at the end of last week.

The average root weight in the seventh West German beet test climbed to 646 grammes from 586 last week but compared with 693 grammes a year ago reports Reuter. The sugar content stood at 14.6 per cent against 14.4 per cent last week.

Crop forecast fails to lift cocoa

THE FORECAST of a 10 per cent drop in West African cocoa production in the 1980-81 season in the latest report by London brokers, Gill and Duffus, failed to stir the market yesterday.

Prices ended marginally lower, depressed by the decline in gold and reports of some producer country selling.

Gill and Duffus estimated that world cocoa production in 1979-80 reached a record 1.6m tonnes resulting in a surplus of 158,000 tonnes over consumption. It calculated closing stocks at 651,000 tonnes would be at the highest level since 1966-67.

Soviet harvest hopes dashed

BY DAVID SATTER IN MOSCOW

HEAVY RAINS and unseasonably cold weather have hampered the Soviet grain harvest in the western parts of the country and there is now little hope that the Soviet Union will be able to correct severe meat shortages in the country in the near future.

U.S. agricultural experts predicted that the Soviet grain harvest this year would be no more than 210m tonnes, an improvement over last year's disappointing harvest of 179m tonnes but far short of the target for the harvest which was 235m tonnes.

Mr. Boris Parshin, a Soviet agricultural official, blamed difficulties in bringing in the harvest, which has now fallen at least a week behind schedule on "unceasing rains" in the northern Ukraine, the Baltic region and many areas of the central Russian non-black soil zone.

The rains combined with unseasonably cold weather in northern and western areas of the country have slowed the pace of the harvest since early August and flattened and ruined considerable areas of grain.

Soviet planners were counting on a successful grain harvest this year to counter the effects of the grain embargo which forced uneconomical distress slaughtering and contributed to sharp declines in Soviet meat and dairy production and shortages of these products in many areas.

Soviet figures for the first seven months of 1980 showed that meat production, which rose sharply early in the year because of distress slaughtering was down 5 per cent for the January to July period compared with the same seven month period of 1979.

U.S. Agricultural experts said that in recent months, meat production on a monthly basis has averaged between 10 and 15 per cent below the level of production in the late spring and early summer months of last year.

Milk production for the first seven months of this year was 4 per cent less than for the same period of last year and butter production was also off 4 per cent.

The reduction in the size of Soviet animal herds which has taken place this year may mean that even with a disappointing harvest, there will be no repetition in early 1981 of this year's distress slaughtering, which was caused by a shortage of feed.

There seems little prospect, however, of any marked improvement in the Soviet meat supply situation, unless the grain harvest this year unexpectedly exceeds the projections presently being made.

USSR grain planting delay

BY OUR COMMODITIES STAFF

THE U.S. Department of Agriculture has warned that the present difficulties with the Soviet wheat harvest are paving the way for even more problems with next year's crop. It says that delays in winter grain seeding may materially reduce the wheat part of the Soviet Union's 1981 grain crop.

Because of the time taken in harvesting this year's crop, there is less time for planting the 1981 winter wheat. "In some areas, the optimal seeding dates have passed with this year's crop still in the fields. Seed shortages have been reported," says the department.

It adds that in some areas farmers are being urged to seed next year's crop with only minimum seedbed preparation. The delay in sowing progress is likely to restrict plantings and development of some autumn-grown winter grains.

"Unless planting conditions improve rapidly, it is unlikely that the Soviet Plan goal of 42m hectares of winter grain will be fulfilled," it added, though part of the reduction might be made up with more seedings of lower-yielding spring grains.

Another important development, USDA said, is the decrease in the estimated useable grain available from the 1980 Soviet crop because of poor harvest conditions and waste losses.

USDA said heavy rains at harvest means losses and waste in the USSR this year will be above average, amounting to 13 per cent or 27m tonnes of the crop, up from the 10 per cent normally.

The third key development has been a slight switch by the USSR toward more wheat and less coarse grains to their import mix, USDA said.

Taken together, these developments point toward a further tightening of the Soviet total grain supply/demand situation.

The USDA had gloomy news for almost everyone, producing new lower estimates for the current year's U.S. grain crops except for wheat in which there has been a bumper harvest. Initial reaction on the Chicago grain futures market, however, was to mark prices down, mainly because traders had anticipated somewhat lower crop forecasts. The slightly more optimistic crop predictions unleashed a wave of selling on a market that had been expecting a far gloomier picture.

However, this market reaction should not disguise the fact that probable American production this year of all grains, including wheat, feedgrains and rice, at 265m tonnes would be 34m tonnes below last year and 2m tonnes down on the August forecast.

The report says that hot, dry weather reduced production estimates for several U.S. crops during August. Maize production is now estimated at 6.53bn bushels, only a slight reduction on the August 6.47bn, which was why the market was bearish, but a big drop on last year's 7.76bn bushels production.

Soyabean production estimates also show a slight fall, to 1.83bn bushels compared to 1.88bn of August's estimate. But this again is a large fall compared with production last year of 2.27bn bushels. Feedgrains estimates are similarly down at 194.1m tonnes compared to 196.7m estimated in August; feedgrains production last year was 233.9m tonnes.

But production of both rice and wheat is expected to be up, wheat to a bumper 2.35bn bushels and rice to 140.2m tonnes.

Fall in cotton stocks seen

WASHINGTON — U.S. cotton stocks next August 1 are projected at 2.7m bales (480 lb), down from 3m bales this year, and the smallest carryover stocks since the early 1950s, the U.S. Agriculture Department said.

Total supply this season is projected at 14.8m bales, down from 18.6m in 1979-80, as the crop is forecast at 11.7m bales, down 20 per cent and August 1 stocks were 25 per cent below a year earlier.

However, the USDA said in its latest supply and demand report that the small supply and expected higher prices will severely limit usage. Domestic use is expected to slip below 6.0m bales from 6.5m last season, and exports will fall sharply to around 6.3m bales from last season's 9.2m.

The department said cotton prices have increased sharply in recent months, reflecting the tight supply-demand balance. Cotton is now priced 15c to 20c per lb above polyester staple in domestic markets and 5 per cent to 10 per cent above competitive foreign cotton in international markets, the USDA added.

Reuter

Danish aid for farming

By Hilary Barnes in Copenhagen

THE DANISH government is proposing to come to the aid of agriculture by channelling about Kr 2bn (£151m) into the farming industry from the assets of pension funds and life insurance companies.

The plan, however, has yet to be agreed with the funds or with other political parties (the government doesn't have a majority on its own). The plan is also opposed by the central bank on the grounds that the money will be diverted away from purchases of government bonds, affecting control of the money supply.

The government has also indicated that it will assist agriculture by amending the wealth tax, the capital gains tax, the tax on breeding herds and by a speedier repayment of value added tax on exports.

Earlier this year, the government agreed to provide guarantees for loans at an interest rate of 5 per cent below the market rate (about 19 to 20 per cent) up to a maximum total of Kr. 700m a year.

Mr. H. O. A. Kjeldsen said after a meeting with Ministers that total net farm incomes have fallen from about Kr. 5.6bn in 1978 to an estimated Kr. 2.3bn this year, giving a fall in the net farm income from about Kr. 55,000 to about Kr. 22,000. At the same time, net interest payments have risen from Kr. 4.3bn to Kr. 6.8bn.

BRITISH COMMODITY PRICES

BASE METALS

COPPER—Lost ground on the London Metal Exchange reflecting the weakness in gold and silver. After opening at £898 forward metal came under general selling and dipped below £895 at which point stop-loss selling was triggered. This depressed the price further to £884 in the morning rings before a minor rally to £891 on the kerb. In the afternoon three months traded around the £889 level but met late selling which prompted a close of £884.5 on the late kerb. Turnover: 17,100 tonnes.

COPPER	a.m. Official	+ or —	p.m. Unofficial	+ or —
	£	£	£	£
Wirebars				
Cash	862-2.5	-16.2	861.5-2	-15.2
3 months	883.5-90.5	-17.5	889-5.5	-15.2
Settlem't	862.5	-18.5	—	
Cathodes				
Cash	837-8	-14.5	834-5	-14.5
3 months	864-5	-13.5	862-3	-14.5
Settlem't	252	-15	—	
U.S. Prod	......		*99-102	......

Amalgamated Metal Trading reported that in the morning cash wirebars traded at £862, three months £889, 88.5, 88, 89, 89.5, 90. Cathodes, cash £835, 36, three months £862, 63, 63.5, 64. Kerb: Wirebars, three months £891, 81.5, 91. Cathodes, untraded. Afternoon: Wirebars, cash untraded, three months £887, 87.5, 87, 88, 89, 89.5. Cathodes, cash £834, three months untraded. Kerb: Wirebars, three months £889, 90, 89, 88, 86, 85.5, 85, 84.5. Cathodes untraded.

TIN—Easier despite a rise at Penang over the weekend. Forward metal opened around £7,350 but fell away to £7,320 in the rings reflecting the decline in copper and general selling. In the afternoon fresh selling developed and this depressed three months to the day's low of £7,270 on the late kerb. The contango narrowed from £80 to £60 despite the larger 1..., forecast rise in stocks. Turnover: 1,135 tonnes.

TIN	a.m. Official	+ or —	p.m. Unofficial	+ or —
High Grade	£	£	£	£
Cash	7270-5	-2.5	7240-50	-40
3 months	7320-5	-32.5	7555-300	-55
Settlem't	7575	-5	—	......
Standard				
Cash	7270-5	-2.5	7240-50	-40
3 months	7320-5	-32.5	7255-300	-55
Settlem't	7275	-5	—	......
Straits. E.	‡$2535	+15	—	......
New York	—	......		

Morning: Standard, cash £7,280, 70, 75, three months £7,330, 20. High Grade untraded. Kerb: Standard, three months £7,320, 25. High Grade untraded. Afternoon: Standard, cash untraded. Three months £7,325, 20, 10, 7,300, 7,295. High Grade untraded. Kerb: Standard, three months £7,300, 7,280, 85, 80, 70, 75, 70. High Grade untraded.

LEAD—Lost ground in line with copper. After opening at £393 three months dipped to £388 before recovering to £390 on trade buying. In the afternoon the price held around this level but met renewed selling on the late kerb to close at £387. The substantial increase in stocks had been widely expected and had little affect on sentiment. Turnover: 5,800 tonnes.

LEAD	a.m. Official	+ or —	p.m. Unofficial	+ or —
	£	£	£	£
Cash	574-4.5	+2.75	372-4	-6
3 months	590-90.5	+2	387-8	-7.5
S'ment	374.5	-2.5	......	......
U.S. Spot	—	......	*42-44	......

Morning: Cash £374, three months £389, 89.5, 90. Kerb: Three months £390, 90.5, 91. Afternoon: Cash untraded, three months £391, 90, 89. Kerb: Three months £387, 86, 87, 86.5, 86.

ZINC—Marginally easier in line with copper and lead. Forward metal opened lower and thereafter held steady to close the late kerb at £340. Turnover: 3,500 tonnes.

ZINC	a.m. Official	+ or —	p.m. Unofficl'	+ or —
	£	£	£	£
Cash	324.5-4.75	-5.62	324-5	-5.5
3 months	339.5-40	-4	339-40	-4.62
S'ment	324.75	-5.75	......	......
Primw'ts			*36.5-37.25	......

Morning: Cash £326, 25, 24.5, three months £340, 39.5. Kerb: Three months £340, 39.5, 40. Afternoon: Cash untraded, three months £340.5, 41, 40. Kerb: Three months £339.5, 40.

ALUMINIUM—Barely changed in idle trading with the heavy increase in stocks discounted. Three months opened at £705 and edged up to touch £708 before easing to close the late kerb at £705. Turnover: 7,425 tonnes.

Alumin'm	a.m. Official	+ or —	p.m. Unofficl'l	+ or —
	£	£	£	£
Spot	657-8		698-700	
3 months	705-6	+1	707-8	+1

Morning: Cash £697, three months £705. Kerb: Three months £705. Afternoon: Cash untraded, three months £705, 04, 05, 07. Kerb: Three months £707, 06, 05.5.

NICKEL—Moved narrowly in subdued trading prior to ending the late kerb at £2,815. Turnover: 208 tonnes.

NICKEL	a.m. Official	+ or —	p.m. Unofficl'l	+ or —
Spot	2790-800	-13.5	5790-800	+3.5
3 months	2820-0	-5	8815-20	—

Morning: Untraded. Kerb: Three months £2,820. Afternoon: Cash untraded, three months £2,815. Kerb: Three months £2,810.

* Cents per pound. ‡ \$M per picul. † On previous unofficial close.

SILVER

Silver was fixed 72p an ounce lower for spot delivery in the London bullion market yesterday at 824.5p. U.S. equivalents of the fixing levels were: Spot \$19.726, down \$1.924; three-month \$20.387, down \$1.913; six-month \$20.926, down \$1.861; and 12-month \$22.17, down \$2.01. The metal opened at 850p-862p (\$20.30-\$20.60) and closed at 835p-847p (\$20-\$20.30).

SILVER per troy oz.	Bullion fixing price	+ or —	L.M.E. p.m. Unofficl'l	+ or —
Spot	824.50p	-72	852.5p	-39
3 months	859.50p	-71.6	884.5p	-42.5
6 months	884.50p	-76.9	—	......
12months	939.00p	-78.6	—	......

LME—Turnover 134 (176) lots of 10,000 ozs. Morning: Three months 863, 67, 85, 67, 62, 64, 65, 64, 63.5, 63, 63.5. Kerbs: Three months 863, 64, 65, 64, 63, 63.5. Afternoon: Three months 863, 64, 77, 78, 79, 80, 81, 80, 83, 84, 85, 84. Kerbs: Three months 883, 81, 80, 76, 75.5, 76.

COCOA

After initial easiness due to light profit-taking, cocoa futures steadied on renewed commission house support which absorbed scale-up trade selling. Producers were again inactive and physical business was scarce as off-take among consumers remains modest, reports Gill and Duffus.

COCOA	Yesterd'ys Close	+ or —	Business Done
Sep	1005-05	+5.5	1007-957
Dec	1056-37	+4.0	1041-18
March	1072-75	+5.5	1076-55
May	1091-93	+3.0	1092-75
July	1110-10	+2.5	1110-1057
Sept	1128-33	+1.5	1118
Dec	1150-58	+5.0	1145

Sales: 3,329 (4,855) lots of 10 tonnes.

COFFEE

Robustas continued in the recent downward trend as losses of £15-£25 were registered in mixed dealings, reports Drexel Burnham Lambert. Volume was light with switch trading the only feature during a quiet morning. A lower than anticipated New York opening prompted further weakness in the afternoon but the market found good trade support around the contract lows.

COFFEE	Yesterday's Close £ per tonne	+ or —	Business Done
Sept	1055-58	-21.0	1063-40
Nov	1085-86	-23.5	1097-75
January	1113-14	-14.5	1157-04
March	1112-15	-14.0	1156-15
May	1150-36	-17.5	1155-38
July	1150-55	-11.5	1139-6
Sept	1150-70	-32.0	11850

Sales: 3,938 (4,438) lots of 5 tonnes. ICO Indicator prices for September 12 (U.S. cents per pound): Other Mild Arabicas 123.00 (127.00); Robustas ICA 1976 127.00 (130.00); ICA 1968 127.25 (130.75); Unwashed Arabicas 212.00 (same). Comp. daily ICA 1968 164.58 (166.42).

GRAINS

LONDON GRAIN FUTURES—The market opened 10p down on commercial selling pressure. Prices declined steadily all day despite some country buying of the spot positions. Pressure was always more evident on wheat than on barley and closed 25p down on the spot and 45p-75p down on the day, reports Acli.

	WHEAT		BARLEY	
M'nth	Yesterday close	+ or —	Yesterday close	+ or —
Sept.	95.95	-0.25	89.75	-0.25
Nov.	98.80	-0.50	92.60	-0.50
Jan.	103.00	-0.65	96.85	-0.45
Mar.	106.65	-0.75	100.50	-0.45
May.	110.35	-0.80	104.10	-0.45
July	113.95	-0.50	—	

Business done—Wheat: Sept. 96.00-95.90, Nov. 99.20-98.70, Jan. 103.55-102.95, March 107.20-106.60, May 110.75-110.30, July 114.15-113.95. Sales 915 lots of 100 tonnes. Barley: Sept. 89.75-89.75, Nov. 92.00-92.55, Jan. 97.10-96.75, March 100.75-100.45, May 104.30-104.05. Sales 623 lots of 100 tonnes.

LONDON GRAINS—Wheat: U.S. Dark Northern Spring No 2 14 per cent Sept. 95.50, Oct. 97.70, Nov. 99.70, Dec. 102.30 transhipment east coast. U.S. Hard Winter 13½ per cent Oct. 96.25, Nov. 97.50, Dec. 99.80 transhipment east coast. Maize: U.S./French Sept. 122.50, Oct. 121.50 transhipment east coast. S. African Yellow Sept.-Oct. 90. Barley: English Feed fob Sept. 90.75, Dec. 99, Feb. 102.50 traded east coast. Rest unquoted.

HGCA — Locational ex-farm spot prices. Other milling wheat: Eastern 96.00, E. Midlands 97.90, Scotland 97.50. Feed barley: Eastern 85.00, E. Midlands 86.10, N. East 85.00, Scotland 83.40.

RUBBER

The London physical market opened steady, ruled very quiet throughout the day, closing on an easier note. Lewis and Peat reported an fob October price for No 1 RSS in Kuala Lumpur of 311 (313) cents a kilo and SMR 20 at 273 (274).

No. 1 R.S.S.	Yest'day Close	Previous Close	Business Done
Oct	64.60-65.10	65.19-65.70	65.20-64.80
Nov	65.80-66.10	65.70-66.20	—
Oct-Dec	65.30-66.00	65.90-66.20	66.20-66.00
Jan-Mar	68.80-69.30	69.90-70.00	70.50-69.40
Apr-Jne	72.20-73.30	73.30-73.40	73.90-72.50
Jly-Sept	75.30-75.40	75.30-75.40	75.40-76.00
Oct-Dec	78.80-78.90	78.70-78.90	78.80-78.70
Jan-Mar	81.40-81.60	81.40-81.50	81.40
Apl-Jne	84.10-84.20	84.10-84.50	—

Sales: 398 (483) at 15 tonnes; 11 at 5 tonnes.

Physical closing prices (buyer) were: Spot 64.50p (64.00p); Oct. 65.25p (same); Nov. 66.25p (same).

SOYABEAN MEAL

The London market opened slightly easier on commission house selling. However, further losses were tendered by a weaker sterling, reports T. G. Roddick. Prices rallied on trade buying but this was short-lived as profit-taking closed the market with losses of £1.80 on the day.

	Yest'rday Close £ per tonne	+ or —	Business Done
October	126.00-26.5	-1.40	127.00-25.50
December	130.50-30.7	-1.50	132.00-29.20
February	132.60-32.8	-1.75	135.00-31.20
April	134.00-34.2	-1.20	134.00-32.90
June	134.00-36.5	-1.25	—
August	134.00-37.0	-1.0	135.00
October	136.00-38.0	-0.50	—

Sales: 145 (356) lots of 100 tonnes.

SUGAR

LONDON DAILY PRICE (raw sugar): £360.00 (same) a tonne cif for Sept.-Oct. shipments. White sugar daily price was £359.00 (£345.00).

The market rose some £8 from pre-weekend levels but later as more selling developed, all the gains were lost. When New York opened lower than anticipated further small losses were recorded before overseas prices moved sharply higher on trade buying of the spot October position, reports C. Czarnikow.

No. 4 Con-tract	Yest'rdays Close	Previous Close	Business Done
	£ per tonne		
Oct	370.20-70.40	375.00-75.50	376.00-60.00
Jan	386.00-87.00	390.00-91.00	390.00-76.00
Mch	395.50-95.75	394.50-94.75	401.00-386.00
May	392.00-92.50	380.00-81.00	395.00-81.00
Aug	374.90-75.50	374.75-74.80	376.00-67.00
Oct	357.50-58.00	355.50-58.00	387.00-50.50
Jan	327.25-27.50	330.00-32.00	333.00-24.75

Sales: 12,917 (17,785) lots of 50 tonnes.

No 2 CONTRACT—Close (in order buyer, seller, business, sales). Oct. 370.50, 372.00, 371.50-350.50, 623. Sales: 623 (737).

Tate and Lyle ex-refinery price for granulated basis white sugar was £342.8 (same) a tonne for home trade and £452.00 (£458.00) for export.

International Sugar Agreement (U.S. cents per pound fob and stowed Caribbean port). Prices for Sept. 12: Daily price 38.80 (32.44); 10-day average 31.72 (31.32).

WOOL FUTURES

BRADFORD—There are fears the threatened British dock strike might reveal some stock shortages in particular qualities, and interfere with production. Another firming factor is the drop in sterling combined with the idea that wool and other related raw materials could be showing more stability and strength.

LONDON NEW ZEALAND CROSSBREDS—Close (in order buyer, seller, business, sales). New Zealand cents per kilo. Oct. 360, 365, nil, nil; Dec. 366, 370, nil, nil; Jan. 368, 370, nil, nil; March 370, 372, 371, 2; May 373, 376, nil, nil; Aug. 375, 380, 379, 4; Oct. 376, 380, 380-379, 3; Dec. 380, 382, 381, 1; Jan. 381, 383, 382, 2; March 383, 385, nil, nil. Sales 12.

SYDNEY GREASY WOOL—Close (in order buyer, seller, business, sales). Australian cents per pound. Oct. 465.1, 466.0, 465.5-462.0, 149; Dec. 475.0, 476.0, 478.0-473.0, 133; March 484.0, 485.0, 486.5-481.8, 146; May 490.P, 490.5, 493.0-489.5, 137; July 492.5, 493.5, 494.0-492.0, 70; Oct. 491.P, 493.0, 492.0-490.0, 0; Dec. 492.0, 493.5, 493.5-491.5, 36; March 493.0, 496.0, 495.0-495.0, 11. Sales: 690.

PRICE CHANGES

In tonnes unless otherwise stated.

	Sept. 15 1980	+ or —	Month ago
Metals			
Aluminium	£810/815	......	£810/815
Free Mkt	\$1710/1749	......	\$1648/70
Copper			
Cash w'bar	£861.75	-15.25	£848.5
3 mths	£889.25	-15.25	£867.75
Cash Cathode	£834.5	-14.5	£820.0
3 mths	£862.5	-14.5	£846.5
Gold troy oz	\$669.0	-18	\$612.5
Lead Cash	£375	-8	£365.5
3 mths	£388	-7.5	£380.25
Nickel	£3,205.00	......	£3,193.43
Freemkt (cif lb)	290/515c	......	290/305c
Platin'mtr'y oz	£202	......	£182.50
Free mkt	£290	-5.10	£263.5
Quicksilver†	\$410/420	+5	\$406/415
Silver troy oz	824.50p	-72	653.80p
3 mths	855.50p	-71.9	680.20p
Tin Cash	£7,245	-40	£7,155
3 mths	£7,257.5	-65	£7,155
Tungsten 22.04lb	\$144.87	......	\$145.55
Wolfrm 22.04lb	\$151/154	......	\$148/151
Zinc cash	£325	-5.5	£350.5
3 mths	£330.5	-4.875	£343.25
Producers	\$780	......	\$780
Oils			
Coconut (Phil)	\$590x	-5	\$550
Groundnut	‡	......	‡
Linseed Crude	£387	......	£401
Palm Malayan	\$542.5v	......	\$530
Seeds			
Copra Philip	\$400	+5	\$430
Soyabean (U.S.)	\$338t	-4	\$305
Grains			
Barley Futures	£92.60	-0.50	£93.75
Maize			
French No3AM	£122.50	......	‡
Wheat			
No.1 Red Spg.	‡	......	‡
No5HardWint	£90.25t	......	£96.25
Eng. Millingt.	‡	......	‡
Other commodities			
Cocoa ship't	£1,097	+4	£1,084
Future Dec.	£1056.5	+4	£1,023.6
CoffeeFt Nov.	£1,085.5	-23.5	£1,578
Cotton A.Index	102.70c	+1.8	98.95c
Rubber (kilo)	64.50p	+0.5	61.50p
Sugar (Raw)	£360	......	£325
Wool't'ps 64s kl.	388p kilo	......	385p kilo

‡ Unquoted. t Oct. u Sept.-Oct. v Nov. z Indicator. § Buyer. † Per 76-lb flask. * Nominal.

POTATOES

LONDON POTATO FUTURES—The market was stagnant with lack of direction from the physical market being main cause, reports Coley and Harper. Closing prices: Nov. 40.10, +10 (high 40.10, low 40.00); Feb. 47.10, +10; April 54.10, +10 (high 54.10, low 54.00). Turnover: 12 (54), lots of 40 tonnes.

TEA AUCTION

LONDON TEA AUCTION—49,513 packages were on offer at yesterday's auction, good demand prevailed. Bright second flush Assams again sold well but others were irregular. East African CTCs met improved competition with dusts a good feature. Ceylons opened fully firm, apart from plain types, but closed on a dull note. Quotations: Quality 140p per kilo (132p); Medium 100p (96p); Plain 58p (58p).

COTTON

LIVERPOOL—Spot and shipment sales amounted to 120 tonnes. Variable demand came forward, without any additional contracts being placed. Useful support was mostly in American type qualities, Latin American growths attracting chief attention.

MEAT/VEGETABLES

SMITHFIELD—Pence per pound. Beef: Scottish killed sides 61.0 to 65.5; Ulster hindquarters 72.5 to 75.9, forequarters 42.0 to 43.8; Eire hindquarters 72.5 to 75.0; forequarters 41.3 to 43.5. Veal: Dutch hinds and ends 103.0 to 106.0. Lamb: English small 54.8 to 60.0, medium 52.8 to 58.4, heavy 46.0 to 50.8; Scottish medium 53.0 to 56.0. Imported frozen: NZ pl 55.9 to 57.0, pm 48.5 to 50.0. Pork: English, under 100 lb 39.0 to 48.8, 100-120 lb 37.5 to 47.0, 120-160 lb 36.0 to 45.2.

MEAT COMMISSION—Average fatstock prices at representative markets on September 15. GB—Cattle 71.11p per kg lw (−1.58). UK—Sheep 114.42p per kg est dcw (−0.89). GB—Pigs 65.84p per kg lw (+0.78).

*

GRIMSBY FISH—Supply fair, demand good. Prices at ship's side (unprocessed) per stone: Shelf cod £5.00-£6.00, codlings £2.80-£4.20. Medium haddock £2.50-£4.20, small £1.20-£3.30. Large plaice £5.40-£6.00, medium £5.00-£8.80, best small £3.40-£4.00. Skinned dogfish (medium) £7.50-£8.50. Lemon soles (large) £9.00, (medium) £7.50. Saithe £2.80-£3.80.

English Produce: Potatoes—Per bag, new 1.20-1.60. Mushrooms—Per pound 0.60-0.70. Apples—Per pound Grenadier 0.04, Newgate 0.05-0.07, Derby 0.06-0.07, Tydeman's Early Worcester 0.08-0.14, Discovery 0.12-0.18, Bramleys 0.08-0.12, Worcester Pearmain 0.10-0.16, Cox's Orange Pippins 0.20-0.25. Pears—Per pound Williams 0.10, Dr. Jules 0.08, Conference 0.10. Plums—Per 12-lb Belles 1.30, Victorias 2.40, Droppers 0.80, Damsons 1.40-1.80, Bush 1.10-1.20. Strawberries—Per ½-lb 0.30-0.40. Cabbages—Per bag 1.30. Cauliflowers—Per 12 2.80-3.00. Beetroots—Per bag 1.00. Cucumbers—Trays 10/20 1.40-2.00. Tomatoes—Per 12-lb 1.60-1.80. Lettuce—Per 12 round 0.80-1.00, Cos 1.30, Webbs 1.20. Sprouts—Per pound 0.10-0.12. Corn Cobs—Each 0.10. Carrots—New crop 28-lb 0.80-1.30. Onions—Per bag 1.50-2.50, Picklers 3.00. Celery—Per pack 20/30 2.50-2.80, naked 12s 1.00. Capsicums—Per pound 0.20. Runner Beans—Per pound 0.12-0.14. Swedes—Per 28-lb Devon 0.80. Courgettes—Per pound 0.20. Cob Nuts—Per pound 0.30. Marrows—Box 12/15 1.50.

AMERICAN MARKETS

NEW YORK, September 15.

THE ENTIRE livestock complex was limit or near-limit up as the livestock markets began to anticipate a bullish pig crop report next week. Precious metals declined sharply. Copper sold off sharply as Phelps Dodge was reported to reach a settlement on a new contract. Coffee was reeling under heavy pressure of long liquidation. Cocoa was strong on good manufacture buying. Sugar was again strong as adverse weather in East Europe dominated the news. Grains and soyabeans finished narrowly mixed on light buying, reported Heinold.

Potatoes (round whites)—Nov. 90.5-90.8 (91.9). March 126.4-127.0 (128.1), April 148.7-149.8.

Sugar—No. 11: Oct. 37.00-37.30 (37.77), Jan. 37.75 (36.75), March 38.78, May 38.39, July 37.60-37.77, Sept. 36.45-36.50, Oct. 35.65-35.75, Jan. 32.60.

Tin—810.0-815.0 (825.0).

CHICAGO, September 15.

Lard—Chicago loose 23.25 (same). New York prime steam unavailable.

Live Cattle—Oct. 69.00-69.10 (68.35), Dec. 70.95-70.90 (69.52), Jan. 72.10, Feb. 72.40-72.25, April 74.47-74.37, June 75.75-75.82, Aug. 75.30, Oct. ——, Dec. 74.50.

Live Hogs—Oct. 46.00-46.10 (45.90), Dec. 49.70-49.65 (48.25), Feb. 53.05, April 52.07, June 55.90, July 57.10, Aug. 55.50-55.10, Oct. 52.70, Dec. ——.

‡‡Maize—Sept. 348 (348¼), Dec. 348¾-348½ (349¼), March 360½-360, May 365¼-366, July 365¼-366, Sept. 358-358½.

Pork Bellies—Feb. 68.35 (66.35), March 68.20 (66.20), May 69.55, July 70.00, Aug. 68.60.

Silver—Sept. 1955.0 (2100.0), Oct. 1993.5 (2113.5), Nov. ——, Dec. 2042.5, Feb. 2094.5, April 2146.5, June 2198.5, Aug. 2250.5, Oct. 2302.5, Dec. 2354.5, Feb. 2407.5, April ——, June ——, Aug. ——, Oct. ——, Nov. ——, April ——.

†Soyabeans—Sept. 807-808 (807), Nov. 826-828 (828½), Jan. 847-848, March 866-867, May 873½-874, July 875, Aug. 867-866, Sept. 845, Nov. 830.

||Soyabean Meal—Sept. 235.2-235.5 (235.8), Oct. 236.0-236.5 (237.0), Dec. 241.5-242.0, Jan. 243.5-244.0, March 246.5-247.0, May 248.5, July 246.0, Aug. 241.0, Sept. 238.0-239.0.

Soyabean Oil — Sept. 26.75-26.80 (28.73), Oct. 26.85-26.90 (26.88), Dec. 27.45-27.50, Jan. 27.75-27.80, March 28.25-28.30, May 28.45-28.50, July 28.70, Aug. 28.65-28.70, Sept. 28.65-28.75.

†Wheat—Sept. 468½ (466), Dec. 486½-485½ (485¼), March 505-504½, May 510-509½, July 507-507½, Sept. 514½-515.

WINNIPEG, September 15. §Barley—Oct 136.10 (136.30), Dec. 138.00 (138.30), March 139.00, May 139.70, July 138.90.

All cents per pound ex-warehouse unless otherwise stated. * \$ per troy ounce. ¶ Cents per troy ounce. ‡‡ Cents per 56-lb bushel. † Cents per 60-lb bushel. || \$ per short ton (2,000 lbs). § \$Can. per metric ton. §§ \$ per 1,000 sq. feet. ‡ Cents per dozen.

EUROPEAN MARKETS

ROTTERDAM, September 15.

Wheat—U.S. No. 2 Dark Hard Winter, 13.5 per cent, Oct. \$210, Nov. \$212, Dec. \$216, Jan. \$223, Feb. \$227, March \$231. U.S. No. 2 Red Winter, Oct. \$200, Nov. \$202. U.S. No. 2 Northern Spring, 14 per cent, Sept. \$209.50, Oct. \$213, Nov. \$218.50, Dec. \$223, Jan. \$243, Feb. \$245, March \$248.

Maize—Afloat \$165, Sept. \$162.50, Oct. \$163, Nov. \$164.50, Dec. \$167.50, Jan.-March \$174, April-June \$174, July-Sept. \$175.

Soyabeans—U.S. Two Yellow Gulfports Sept.-Oct. \$327.25, Oct. \$330.50, Nov. \$331.50 sellers, \$331 traded, Dec. \$339.90, Jan. \$344.50, Feb. \$350, March \$351.50, April \$355, May \$356. Argentine afloat \$315, Sept. \$320, mid-Sept./mid-Oct. \$322, Oct. \$322.80 sellers.

Soyameal—44 per cent protein U.S. afloat \$290, Sept. \$290, Oct. \$290, Nov.-March \$300. Brazil Pellets afloat \$293, Sept. \$295, Oct. \$301, Nov. \$306, Dec. \$308, Nov.-March \$312.50.

PARIS, September 15.

Cocoa (FFr per 100 kilos)—Sept. 1000, Dec. 995-1000, March 1028-1050, May 1035-1060, July 1045, Sept. 1080. Sales at call 0.

Sugar (FFr per 100 kilos)—Oct. 3550-3580, Nov. unquoted, Dec. 3655-3664, March 3840-3845, May 3800-3850, July 3700-3780, Aug. 3625-3730, Oct. 3549-3550. Sales at call 15.

INDICES

FINANCIAL TIMES

Sept. 12	Sept. 11	Mnth ago	Year ago
282.10	281.40	274.43	288.14

(Base: July 1, 1952=100)

MOODY'S

Sept. 12	Sept. 11	M'nth ago	Year ago
1513.0	1289.2	1247.5	1119.0

(December 31, 1931=100)

DOW JONES

Dow Jones	Sept. 12	Sept. 11	Month ago	Year ago
Spot	468.35	464.84	448.08	400.75
F'tur's	478.68	476.74	401.71	415.91

(Average 1924-25-26=100)

REUTERS

Sept. 15	Sept. 12	M'nth ago	Year ago
1769.1	1707.5	1710.8	1580.7

Base: September 18, 1931=100

APPOINTMENTS

Divisional post at Fairey Holdings

Mr. Alan Hindley has been appointed managing director of the Fairey Filtration Division of FAIREY HOLDINGS to direct and co-ordinate Fairey Filtration at Heston, Fairey Arlon BV in Holland and Fairey Arlon Inc. in the U.S.

Prior to joining the Fairey Group, Mr. Hindley was from 1978 vice-president of business development and engineering resources for Solus Ocean Systems. Before that he was ten years with Honeywell Control Systems, the last eight years of which were spent at the company's European headquarters in Brussels.

Mr. Alan Hindley

★

Mr. R. S. Fulford will be joioing UNITED GAS INDUSTRIES on October 1 to succeed Mr. N. P. White as group chief executive, when he retires oext year.

Dr. Keith Bright has been appointed to the Board of LONDON AND CONTINENTAL ADVERTISING HOLDINGS. Dr. Bright is a director of Associated Biscuit Maoufacturers and the Exchange Telegraph Company.

★

Mr. A. G. Coates has been appointed executive vice-president of MIDLAND FINANCIAL SERVICES, Midland Bank's subsidiary in Canada. He was previously manager of the Kuala Lumpur branch of European Asian Bank, a Midland associate company. Midland Financial Services is headquartered in Torooto. It opened an office in Vancouver last year and has recently opend an office in Edmonton.

Mr. A. G. Coates

★

Mr. John N. Clisby has been appoioted group sales director of TUDORGLASS HOLDINGS, of Hayes.

★

Mr. P. S. P. Knight, group secretary of James Halstead (Holdings), has beeo appointed to the Board of member company TITAN LEISURE GROUP.

★

Mr. James K. Dobey has been elected to the Board of AMPEX CORPORATION in place of Mr. Kenneth C. Christensen, who has retired. Mr. Dobey retired last year from Wells Fargo and Co. and its principal subsidiary, Wells Fargo Bank.

★

Mr. Kenneth Bradford, formerly a director and general manager of the British Bank of the Middle East, now chairman's representative — BBME, has joined the London Advisory Committee of the BRITISH BANK OF THE MIDDLE EAST.

★

Mr. H. P. Foxon, deputy chief executive of Inchape and Co., has been appointed to the Lopdon Advisory Committee of the HONGKONG AND SHANGHAI BANKING CORPORATION.

★

Mr. Jim Brown, circulation director of the Manchester Evening News, is rejoining THOMSON REGIONAL NEWSPAPERS on November 3 as group circulation director.

★

Mr. Ronald R. Bowey, a director of the Bowey Group, has been appointed joint managing director of its subsidiary, RALPH BOWEY AND SON. The other joint managing director of that company is Mr. John F. Tully.

★

UNITANK STORAGE COMPANY has made the following appointments from October 1: Mr. Peter Hughes, director, sales and development, Mr. Rod McGregor, director, operations and engineering and Mr. Alex Yabsley, director, finance and administration. At the same time Mr. Gordon Watson will become vice-president of Unitank Inc., based in the U.S.

★

Mr. John A. Churchward has become managing director of HARRIS AND DIXON (SHIPBROKERS) in place of Mr. Harry Howell, who has retired from that position. Mr. John C. Robbins aod Mr. Danny M. Stewart are now the joint deputy managing directors.

★

Eight appointments have been made to the North West Regiooal Council of the CONFEDERATION OF BRITISH INDUSTRY for a three-year term. They are Mr. Harry Harrison (Simon Engineering), Mr. F. A. Parker (British Vita), Mr. C. W. Newton (Turner and Newall), Mr. J. J. Hallam (Allspeeds), Mr. Bob Ing (Valor), Mr. G. Clegg (Capper-Neill), Mr. Charles Mustard (Alliance Smurfit Cases) and Mr. K. A. Allen (J. Bibby and Sons).

★

Mr. Richard De La. B. Granville, a director of Hoare Govett has been appointed to the Board of BRITISH INDUSTRIES AND GENERAL INVESTMENT TRUST, a company managed by Drayton Montagu Portfolio Management.

★

Mr. Richard Mitford Barrett has been appointed a director of C. ROWBOTHAM AND SONS (INSURANCE). Mr. John Kellie Heber-Percy has been appointed a director of C. ROWBOTHAM AND SONS (UK).

★

At THE MARLEY TILE CO., Mr. R. M. Armstrong becomes a director; at Marley Extrusions Mr. T. M. Arnott, is appointed deputy managing director; and Mr. R. R. T. Kittow, sales director; at Marley Floors Mr. M. Gray is made director.

★

Mr. Neil Wall has been appointed to the board of NORTHERN FOODS.

★

Mr. J. P. K. Haslehurst, managing director of Wellman Mechanical Engineering has been appointed chairman of the BRITISH METALWORKING PLANT MAKERS' ASSOCIATION.

★

Mr. T. M. Smeddon, director, administration and finance of Davy McKee (Minerals and Metals) has been appointed chairman of the IRONMAKING AND STEELMAKING PLANT CONTRACTORS' ASSOCIATION.

★

LILLYWHITES, sport and leisure-wear company, owned by Trusthouse Forte, has promoted three senior executives to directors. They are Mr. Stephen Richardson, Mr. Jeffrey Margolis who becomes buying director, and Mr. Jim Allan, marketing director. Mr. Richardsoo has also beeo appointed a director of Lillywhites Cantabrian, the company's manufacturing unit. Other Lillywhites Caotabrian appoiotmeots are Mr. Colin Brown, production director, and Mr. John Moore, sales director.

★

WILLIAMS (HOUNSLOW) has appointed Mr. R. W. Munkenbeck as managing director. He replaces Mr. D. C. P. Carey, who has resigned. The company is part of the chemical division of Morton Norwich Products Inc., Chicago, U.S.

★

The MAT Group has appoioted Mr. Keith Patterson as cbief executive of MAT TRANSAUTO. He joints MAT from Carreras Rothman, where be was director in charge of information systems and distribution arrangements.

★

AUTOMOTIVE DISTRIBUTORS has appointed Mr. Graeme Millar as marketing director.

★

LEX VEHICLE LEASING has appointed Mr. Richard Archer as managing director.

★

Mr. Brian Mathson has been appointed sales director of DUFAYLITE DEVELOPMENTS, a member of the Hanson Trust Group. He succeeds Mr. Tony Bryant-Fenn who leaves to join the Board of another Hanson Trust company.

★

Mr. J. Kenneth Kilcarr has been elected chairman of PAN AM WORLD SERVICES, INCORPORATED. Mr. Kilcarr, who continues to serve as executive vice president finance and corporate planning, succeeds Mr. James H. Maloon, who earlier this year accepted a position with another firm.

★

The SIMPSON LABEL COMPANY of Dalkeith, bas appointed Mr. A. J. Younger as marketing director.

★

Mr. Donald H. A. Huddart has been appoineted by STANDARD TELEPHONES AND CABLES as commercial director, telecommunications. As a member of the management board, Mr. Huddart will be responsible for long-term commercial plans, policies and strategies for the telecommunications business of STC.

Mr. Donald Huddart

★

Mr. Harold A. McGhee has beeo appointed to tho Board of CALEDONIAN ASSOCIATED CINEMAS.

JOBS COLUMN

A dubious—and clearly costly—blessing

BY MICHAEL DIXON

A NATION dismayed by record unemployment can hardly be blamed for couoting any blessing. And according to statements madc publicly at the recent meeting of the Standing Conference of Employers of Graduates, one such blessing lies in the job-finding record of people leaviog United Kingdom oniversities and polytechnics at the eod of undergraduate courses leading to degrees or higher diplomas.

The job-prospects for these new "graduates," as estimated during the meeting at Cambridge University, contrasted starkly with the Government's figures published a few days later, describing the position of youngsters leaving full-time education at lower academic levels. The statistics showed that 265,000 pupils under 18—equivalent to roughly a third of those who left school this summer—were still unemployed in mid-August. By that time, of course, many would not have begun to look seriously for a job. But the 265,000 nevertheless represented a 44 per cent increase on the figure for 1979.

The summer's new graduates, on the other hand, were reportedly encountering a largely sustained market for their services. Certainly, it was stated, there was an "imbalance of supply and demand." For electrical eogineers aod other numerate graduates from the science side of higher education, demand by employers continued to outstrip the supply from the campuses. For the less or non-oumerate people from the other side, who had taken arts or social studies, the demand was weaker. But there were still openings for them in such fields as sales, and computer and financial work especially in governmental organisations. And while the position was thought likely to worsen oext year, there was no opeo expectation at the meetiog that the deterioration would be severe.

An external observer might, however, be forgiven for suspecting that this relatively confident view is inflated by a dubious optimism.

Witness the table, which broadly compares the movements of people awarded bachelor's degrees and higher diplomas by the universities and polys in 1979, with the record of their 1975 predecessors. These graduates are divided into "science-side studeots" including those from engineering and technology, and "arts-side" students including those from social studies and courses denoted by the official statistics only as "others."

The table suggests that the meeting's phrase "an imbalance of supply and demand" scarcely does justice to the difference between the science side and the arts side. For one thing, the number of science people believed to he unemployed at December 31—about six months after graduating—fell by almost a fifth over the period, whereas the correspooding number of arts-side people rose by towards a quarter. For another, the aonual output of less employable arts-side graduates grew considerably faster than the other side's ontput. The problem of correcting this particular imbalance can only be worsened by the reduced inflow of science people into teaching either directly or, apparently, by way of training courses.

WHAT HAPPENED TO NEW "GRADUATES" FROM UNIVERSITIES AND POLYTECHNICS

	Science-side students 1975	Science-side students 1979	% change	Arts-side students 1975	Arts-side students 1979	% change
Known to have entered regular UK employment io:						
managerial work	832	836	+ 0.5	1,657	2,176	+ 31.3
scientific R & D	2,789	4,500	+ 61.3	61	126	+106.6
environmental planning	1,859	2,102	+ 13.1	501	522	+ 4.2
rootine scientific work	1,199	1,280	+ 6.8	49	78	+ 59.2
production work	2,361	2,197	− 6.9	273	628	+130.0
buying, marketiog and sales	401	630	+ 57.1	807	2,188	+171.1
management services	1,477	2,319	+ 57.0	286	797	+178.7
financial work	1,183	1,119	− 5.4	2,416	4,271	+ 76.8
legal work	45	22	− 51.1	767	971	+ 26.6
information work	175	169	− 3.4	760	968	+ 27.4
personnel and welfare work	1,039	1,241	+ 19.4	1,792	2,123	+ 18.5
teaching and lecturing	245	156	− 36.3	797	2,184	†
medical, and other work	178	4,340	*	941	1,975	+109.9
Tatal entered UK employment	13,803	20,931	+ 51.6	11,107	19,007	+ 71.1
Academic research and study	4,877	5,104	+ 4.7	2,951	3,358	+13.8
Vocational training, including teacher-training	3,204	2,339	− 27.0	9,943	9,341	− 6.1
Overseas students returned home, and miscellaneous	2,843	4,240	+ 49.1	2,917	4,204	+ 44.1
Temporary employment	1,049	1,118	+ 6.6	1,972	3,418	+ 73.3
Believed unemployed at December 31	1,705	1,366	− 19.9	2,261	2,802	+ 23.9
Whereabouts unknown	3,222	4,099	+ 27.2	5,229	7,233	+ 38.3
Grand total	30,703	39,197	+ 27.7	36,380	49,363	+ 35.7

* Fair comparison prevented by inclusion in 1979 figure of university medical graduates.
† Fair comparison prevented by inclusion in 1979 figure of former teacher-training college students.

Doubts are raisad also by the total of 1979 graduates believed unemployed at December 31, which the table shnws as 4,168. But this leaves oot of account any joblessness among the 11,332 people whose whereabouts were simply unknown. It seems best to assume that unemployment among the unknowns was the same as among the knowns, which results in a total rate of 5.4 per cent.

Computing a comparable rate for under-18s who left educatioo during last year, is made difficult by the lack of any count at December 31. But the mid-December figure was 39,200, and the mid-January count was 45,900. Tho total of undor-18 leavers in 1979 was roughly 850,000, of whom at least a fifth probably left before the summer. But even if all had left at the same time as the graduates in the summer, and the full 45,900 had been jobless at December 31, the comparable unemploymeot rate for the school-leavers would have been only the same as the graduates' rate at 5.4 per cent.

So it seems that, on the latest figures available, the employment position of graduates is oot a blessing. It is just another problem. And since the higher education of each graduate costs the taxpayer roughly an extra £12,000, it is a particularly expensive problem at that.

INTERNATIONAL COMPANIES and FINANCE

$235m takeover by General Electric

BY PAUL BETTS IN NEW YORK

GENERAL ELECTRIC (GE), the leading U.S. electrical equipment and electronics group, has taken another major step in its current efforts to expand its operations in the semiconductor field.

The group is to buy for about $235m Intersil, a Californian manufacturer of integrated circuits with sales of $140m last year.

GE and Intersil announced at the week-end that they had signed an agreement in principle whereby the Californian semiconductor manufacturer would become a wholly-owned subsidiary of GE which will pay $35 for each of Intersil's outstanding 6.7m shares.

GE said a key element in the proposed merger was Intersil's advanced technology in integrated circuit design, process and manufacturing, thus reflecting further GE's intentions to strengthen its presence in the microchip market.

Although GE pulled out of the integrated circuit market about ten years ago, the largest U.S. electrical equipment manufacturer is now attempting to correct what is generally regarded as having been a strategic error by investing heavily in this expanding electronics sector.

Like other major U.S. conglomerates, GE is seeking to build up its in-house capabilities in this sector, not only to ensure itself with adequate supplies, but also to guarantee the company the specialised custom-designed equipment which the large volume producers in this field are increasingly unwilling to manufacture.

GE's latest drive in the electronics business has been eloquently reflected in a series of other moves to expand its activities in this sector.

Excluding the latest deal with Intersil, GE in recent months has committed more than $150m in new electronics manufacturing and development facilities.

Last month, it announced a $31.3m expansion of its industrial electronics facilities at Charlottesville in Virginia, while the week before it said it planned to build a new microelectronics centre at North Carolina's Research Triangle Park with an initial investment of $55m which could grow to more than $100m over the next five years.

Earlier, GE announced a $50m expansion of its corporate research and development centre at Schenectady, New York, of which more than half is to be devoted to building a modern electronics laboratory for electronic materials research and semi-conductor processing.

The company has indicated that by the mid-1980s the electronic content in GE's diversified product line would affect about two-thirds of its overall sales.

Rockwell may sell business jets division

By Ian Hargreaves in New York

ROCKWELL International, the Pittsburgh-based manufacturer of motor and aerospace components, is considering the sale of a division which makes turbo-prop business jets.

The company said yesterday that it was holding discussions with "several U.S. companies" about possible sale of the Oklahoma-based division, which is currently producing 11 Commander aircraft per month.

The division employs 900 people and claims 12 per cent of the U.S. market for turbo-prop business aircraft and 28 per cent of the medium size bracket, where it competes most strongly. Rockwell said yesterday that it intended to step up production to 13 units per month early in 1981.

Mr. Bastian Hello, head of Rockwell's aviation interests, also said that the company would only contemplate selling its general aviation division if the buyer undertook to maintain current product development plans. The division is about to unveil a third type in the Commander range.

Aerospace, of which the general aviation division is a part, accounted for 26 per cent of the company's 1979 sales total of $6.2bn. Among Rockwell's aerospace activities is its role as main contract for the Space Shuttle programme.

Technologies suit terminated

By Our Financial Staff

THE JUSTICE DEPARTMENT has filed a proposed consent decree to end its anti-trust suit against United Technologies.

The suit sought to block United's acquisition of about 50 per cent of Carrier, a leading manufacturer of heating and air conditioner systems.

The proposed decree would require United, for a reasonable fee, to grant a licence to anyone making an application for any patent, for the related know-how necessary to practise the patent

Ruling on Trustco offer near

BY ROBERT GIBBENS IN MONTREAL

THE ONTARIO Supreme Court yesterday was expected to rule on a request by Royal Trustco, Canada's largest trust company, for an order halting a C$413m (US$356m) bid by Campeau Corporation, the real estate development group.

The C$21 a share bid for Royal Trustco common and C$29.93 for the preferred expires this Friday. Campeau is controlled by Mr. Robert Campeau, an Ottawa construction and real estate millionaire who says he wants a minimum 54 per cent of Royal Trustco as an investment.

Royal Trustco was seeking an order restraining Campeau from going ahead on the grounds that insufficient information had been provided in the bid circular, that it was illegal and non-enforceable, and that acceptance by more than 25 per cent of Royal Trustco shareholders would breach U.S. law and lead to forced divesting of Trustco's bank subsidiaries in Florida.

For the past 10 years Trustco has been building up its banking interests in Florida, which has a large Canadian population. It owns seven Florida bank subsidiaries.

Late last week, the Florida Department of Banking issued a cease-and-desist order against Campeau, saying it was illegal for anyone to acquire control of a Florida state-chartered bank without obtaining approval of the state banking authorities. The department said that Campeau had not filed an application for approval. Five of the seven Florida banks owned by Trustco are state-chartered.

Meanwhile, the Ontario Securities Commission yesterday opened public hearings on an agreement under which Campeau would buy a 5.4 per cent interest in Trustco from a Toronto real estate holding company, Unicorp Financial, in exchange for Campeau convertible preferred. The issue is whether this agreement forms part of the Campeau takeover bid for Trustco, and if so, whether the same offer should not be extended to all other Trustco shareholders.

Tosco pays $140m for refinery

BY OUR FINANCIAL STAFF

SUN COMPANY, the U.S. oil group which acquired Seagram Company's U.S. oil and gas interests for $2.3bn, has agreed to sell a refinery to Tosco Corporation for $140m.

The 48,500 barrel per day refinery, at Duncan, Oklahoma, will boost the capacity of Tosco, the second largest independent refiner in the U.S., by about 23 per cent to 261,500 barrels per day.

Tosco said the refinery could process heavy, sour crudes and therefore fitted in well with its policy of concentrating on less desirable, more plentiful crudes.

The acquisition is also intended to enhance the group's ability to go-ahead with oil shale development plans.

Tosco has a 40 per cent interest in the Colony oil shale project in Colorado. Tosco said yesterday it expected to apply for a Federal loan guarantee to assist in the construction if its share of the project. Exxon, which holds the remaining 60 per cent of the project, has estimated its spending on the project at $1bn.

The Duncan refinery represents less than 10 per cent of Sun's U.S. refining capacity. It said the sale was consistent with its objective of reallocating assets to give emphasis to primary energy resource development and, in its refining operations, to giving emphasis to lubricants and petrochemicals while consolidating its fuels business.

Sun, which includes the Athabasca tar sands oil extraction project in its interests, bought reserves estimated at 120m barrels of oil and 300bn cubic feet of gas in the takeover from Seagram of Texas Pacific Oil Company. It also gained extensive unexplored areas in the U.S.

Overseas expansion by Huffy

BY TERRY BYLAND

HUFFY CORPORATION, the leading U.S. bicycle manufacturer, claimed yesterday in London that its production of 3.8m units last year had made it the world leader.

The company announced a $10m convertible subordinated guaranteed debenture at the weekend. It will be issued by its newly formed subsidiary Huffy International N.V. The issue coincides with a major sortie into export markets by Huffy which does not at present sell any unit outside the U.S.

In May, the group increased its production potential by one third to 4m units with the opening of a new manufacturing plant in Oklahoma.

Mr. H. Shaw, president and chief operating officer, said in London yesterday that the company was in the process of setting up sales links overseas but that tariff barriers were a major problem.

In fiscal 1980, Huffy earned $8.9m or $2.20 a share on sales of $237.5m.

Franco German tyre merger called off

By Our Financial Staff

PLANS FOR Continental Gummi Werke, the West German tyre group, to acquire a controlling shareholding in Kleber-Colombes, the loss-making French tyre company, have fallen through.

In a terse statement, Continental Gummi gave no reasons for its decision to pull out of the deal which would have created a major cross-frontier tyre group with 26 manufacturing plants and an annual turnover of around $2.2bn.

"In order to protect the interests of both companies and in view of the competitive situation in the European rubber industry no further comments will be given," the German company declared.

When announced in June this year, the deal was to have involved Continental Gummi in the purchase of Michelin's major shareholding in Kleber.

This stake plus shares owned by interests close to Michelin, which is the largest tyre group in France, would have given Continental Gummi around 64 per cent of Kleber at a price of around FFr 97m ($24m).

Both Continental Gummi and Kleber have been involved in re-organisation of the European tyre industry in recent years. In the middle of 1979, the German group acquired the European operations of Uniroyal, the troubled U.S. tyre maker.

First sterling Eurobond for French bank

By Francis Ghilès

THE FIRST sterling-denominated Eurobond for a French bank, Banque Nationale de Paris, was awaiting its launch last night through a group of banks led by Morgan Grenfell, BNP and Kleinwort Benson. The amount of this 10½ year issue is £15m and the indicated coupon 13¾.

The bonds, which should be priced at par, are redeemable at the borrower's option from 1986.

Most seasoned sterling-denominated bonds were steady yesterday, though some issues eased *slightly* on *news* of the new issue.

Sterling convertible Eurobonds, meanwhile, continue to attract strong support. The 8 per cent Kollmorgen bond to 1995 was trading at 108-109 while the 8 per cent Orient Finance paper was quoted at 113-114.

In the dollar sector, the new increase in U.S. money supply combined with a weak New York bond market to depress seasoned issues, particularly at the shorter end of the maturity spectrum.

A new issue is being arranged in this sector, a $20m 15-year private placement for the EEC, which carries a coupon of 13 per cent, through Hill Samuel. This "bought" deal is being placed with four other banks, aside from the lead manager: BNP, Banque Internationale a Luxembourg, Bayerische Landesbank and the Midland Bank Group.

Investors will benefit from a ten-year call protection on the notes which will be priced at par. Proceeds of the issue are earmarked for project lending under the terms of the Ortoli facility.

Bond prices in the hard currency sectors were also under pressure. The DM 150m public bond issue for the Republic of Austria was priced at 99½ by the lead manager, Dresdner Bank, instead of the indicated price of par. If the 1½ per cent selling group commission is taken into account, investors get a yield of 8.57 per cent. Despite this, the bonds fell to a more than one point discount from their issue price during the first hours of trading yesterday afternoon.

Only two months ago, the same borrower was able to raise money in this sector on a yield slightly below 8 per cent. Since then, yields on prime names have climbed by more than 50 basis points.

Svenska Handelsbanken is to raise $20m through an issue of floating rate certificates of deposits in Singapore, believed to be the first such issue in that market by a non-resident bank

Terms provide for interest to be paid at a margin of ⅛ per cent over six-month Singapore interbank rates for U.S. dollars. The three-year issue is priced at par and lead-managed by Nordic Bank's Singapore branch.

Mexican bank seeks $300m

By Our Euromarkets Staff

MEXICO'S Banco Nacional de Comercio Exterior has awarded a mandate to Intermex to raise $300m for seven years on terms that mark a further softening of conditions for Mexican state borrowers.

The credit, a bullet which will be repaid in full at maturity instead of in instalments during the life of the loan, bears a margin of only ⅝ per cent over Libor. Recent public sector Mexican credits have carried split ¾-⅞ per cent margins.

BORROWER PROFILE — NICARAGUA

Happy ending in sight

International banks seem likely to accept the terms negotiated with the Sandinista Government on Nicaragua's public debt. William Chislett in Mexico City and Peter Montagnon in London report.

THE Drawn out renegotiation of Nicaragua's foreign debt seems to be heading for a happy end. While it is too early to arrive at any specific consensus, initial reactions to the rescheduling proposals sent 10 days ago to about 120 international banks are understood to have been positive. Several banks have indicated they will accept the proposals and none has yet turned them down.

The proposals, agreed in principle between the Sandinista Government and a steering committee of 13 major banks, cover $582m of Nicaraguan public sector debt contracted before the downfall of the Somoza regime in July 1979. The debt is to be rescheduled over a period of 12 years at an initial margin of 1 per cent above Libor rising in stages to 1¾ per cent. A five-year grace period is included.

Consolidated into the $582m is unpaid interest between July 1979 and the end of this year calculated on the basis of a ½ per cent margin over Libor.

While the agreement has been circulated to a very large number of banks, it does already, of course, have the endorsement of the 13 members of the steering committee which together hold 52 per cent of the total claims.

One member bank, Citibank, has claims amounting to $56m, or nearly 10 per cent of the total set for rescheduling. The other members of the steering committee are: Bank of America, Bankers Trust, Deutsch - Südamerikanische, First Chicago, Lloyds Bank International, Manufacturers Hanover, Merban Corporation, Merrill Lynch, Royal Bank of Canada, Sanwa Bank, Swiss Bank Corporation and Wells Fargo.

For these creditors a very important facet of the agreement is that it involves rescheduling at commercial rates. If this is a source of satisfaction to the banks, some might argue that it represents a defeat for Nicaragua, which had been holding out for substantially softer terms and at one stage wanted to reschedule the debt until 2003.

Bankers close to the agreement argue strongly, however, that it is in Nicaragua's own best interest to accept commercial rates. As it stands the agreement is already a small first step towards paving the way for a resumption of international lending to Nicaragua. Once the country demonstrates its ability to meet the conditions of the agreement, new short-term trade financing could become available very quickly.

A crucial test in this respect for Nicaragua will be whether it can meet the first payment of $20m in interest, which is due under the agreement on December 15.

The banks feel that further financial assistance will be essential for Nicaragua to revitalise its war-ravaged economy. The country essentially is rich in natural resources and has a large untapped economic potential, especially in agriculture.

But the economy was shattered by the fighting, which took the lives of 35,000 out of a population of 2.5m. Gross national product fell 37 per cent last year. Hardcore unemployment is estimated at 28 per cent of the workforce.

When former President Anastasio Somoza left in July 1979, foreign exchange reserves were down to only $3.5m. Now they have recovered somewhat. According to Sr. Alfredo Alaniz, the central bank president, reserves stood at $144m in June, but the country is expecting a current-account deficit of $249m this year after a surplus of $65m in 1979.

The steering committee did attempt to take account of these factors in negotiating the agreement. Interest payments are to be made on a flexible basis to avoid placing undue burdens on the country's limited foreign exchange cash-flow.

Some bankers, however, would welcome renewed involvement of the International Monetary Fund in Nicaragua. The fund has been kept at arms length by the Sandinista regime, partly because of bitter memories associated with a fund credit of $67.5m granted to the country only a few weeks before Somoza fell. The credit was construed in some quarters as IMF support for his regime.

Nicaragua is not receiving any balance of payments support from the IMF but it has kept up to date with quota payments to the fund.

Meanwhile, not all the country's foreign debt is covered by the agreement. Still to be resolved is what happens to loans contracted by companies formerly in the hands of General Somoza himself and which have now been nationalised. The same applies to loans contracted by Nicaraguan banks nationalised by the Sandinistas, and those by other private companies.

The U.S. investment banking firm, Leslie Weinert and Co., financial advisers to Nicaragua, estimates that these three categories together account for a further $200m-$250m in foreign debt. Discussions on this debt are due to take place soon.

They will take place in an environment that is now considerably more relaxed than two or three months ago when many bankers doubted that any satisfactory solution to the country's debt problems was possible.

One banker close to the present agreement described it as being one in which there are no winners and no losers.

Reaching this commitment has involved concessions from both sides, always within a framework of what is commercially viable. Doubtless the Nicaraguan experience thus provides a lesson that will be drawn on in future if other Third World debtors also reach the brink of default.

FT INTERNATIONAL BOND SERVICE

The list shows the 200 latest international bond issues for which an adequate secondary market exists. For further details of these or other bonds see the complete list of Eurobond prices published on the second Monday of each month.

Closing prices on September 15

U.S. DOLLAR STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Brit. Oxygen F. 10¾ 90	50	84⅞	85⅜	−0⅛	−0⅛	13.56
CECA 11½ 88	100	94⅞	95⅜	−0⅛	−0⅛	12.49
Citicorp O/S Fin. 10 88	300	90½	91	−0⅛	−0⅛	12.30
Con. Illinois O/S 9¾ 86	150	89	89½	−0⅛	0	12.44
Denmark 11¾ 90	100	92¾	93¼	−0⅛	−0⅛	13.03
Dome Petroleum 13½ 92	50	101	101½	−0⅛	+0⅛	13.25
EEC 11 95	75	87¼	87¾	−0½	−0½	12.90
EEC 11 95	70	87½	88¼	−0⅛	−0⅛	12.89
EIB 11¾ 92	80	90⅞	91⅜	−0⅛	−0½	13.26
EIB 13¾ 90	100	102¾	103¼	−0½	−0⅛	13.17
Eksportfinans 11⅛ 87	50	95	95½	−0½	−0⅛	12.34
Eksportfinans 9½ 87	75	86⅞	87⅜	−0⅛	+0½	12.38
Elec. de France 10 88	125	88⅜	88⅞	−0⅛	0	12.33
Export Dv. Cpn. 12¾ 87	100	100⅝	100⅞	−1½	−1½	12.62
Export. Dv. Cpn. 9½ 86	150	90	90½	−0⅛	0	12.05
Federal Dev. Bk. 12⅛ 85	75	100½	101	+0⅛	+0⅛	11.99
Fin. Exp. Credit 10½ 85	50	92¾	93¼	−0½	+0⅛	12.50
Finland, Rep. of 9½ 86	100	87⅛	87⅝	−0½	−0⅛	12.80
Ford O/S Fin. 12¾ 85	250	97¼	97¾	−0⅛	−0⅛	13.29
George Weston 13½ 87	30	99⅜	99⅞	−0⅛	−0⅛	13.55
GMAC O/S Fin. 11 84	100	95⅞	96⅛	−0½	−0⅛	12.26
GMAC O/S Fin. 13⅛ 86	100	102⅝	103⅛	−0⅛	−0⅛	12.46
Goodyear O/S 12½ 87	75	97½	98	−0⅛	−0⅛	12.99
Hudson's Bay 11½ 90	75	93	93½	−0⅛	+0⅛	12.72
IBM Canada 10½ 85	50	95	95½	−0½	−0½	11.83
ICI Fin. Ned. 11 83	100	97⅜	97⅞	−0⅛	−0⅛	12.08
Int. Harvester 12¾ 85	115	98⅜	98⅞	−0⅛	−0⅛	13.20
McGraw 13½ 85	75	99⅝	100⅛	−0⅛	−0⅛	13.48
NatWest Ind. 13⅝ 87	50	99½	100	−0½	−0⅛	13.64
Nova Scotia 10⅝ 90	50	91⅛	91⅝	−0⅛	−0⅛	12.25
OKB 10 85	50	92⅜	92⅞	−0⅛	−1	12.08
Pembroke Capital 9¾ 87	100	†87½	88	−0⅛	−0½	12.37
Pemex 11⅛ 88	100	92⅜	92⅞	−0⅛	−0⅛	13.04
Quebec Hydro 11½ 92	100	91½	92	−0⅛	+0⅛	12.88
Repsteel O/S 11½ 89	100	87⅜	87⅞	−0½	−0⅛	14.20
Raylease Ltd. 11⅛ 86	50	96⅛	96⅝	−0⅛	0	12.23
SNCF 12⅝ 85	50	100⅜	100⅞	−0⅛	−0⅛	12.15
Swed. Ex. Cred. 12½ 85	40	†98¾	99¼	−2⅛	−2⅛	12.75
UB Finance 8V 11 90	50	88½	89	0	−0⅛	13.08
Unilever NV 9¾ 90	100	84⅛	84⅝	−2⅛	−0⅛	12.69
World Bank 9¾ 85	200	91¼	91¾	−0½	0	12.18
World Bank 10½ 87	300	91¼	91¾	−0½	−0⅛	12.17

Average price changes... On day −0⅛ on week −0⅛

DEUTSCHE MARK STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Akzo 8 90	125	100½	101¼	−0½	−1⅛	8.85
Australia 8⅛ 90	250	100⅜	101⅛	0	+0½	7.96
BFCE 7¾ 87	100	97	97¾	−0⅛	−1⅛	8.28
BFCE 8⅛ 95	100	97¾	98½	−0⅛	−1⅛	8.35
Brazil 8 87	150	88½	89⅛	−0⅛	−1½	10.33
Council of Eur. 7⅞ 89	100	93¾	94½	+0⅛	−0⅛	8.22
Denmark 7⅞ 86	100	98	98¾	−0⅛	−0⅛	8.24
Denmark 8¼ 92	100	99	99¾	−0⅛	−0⅛	8.33
EEC 7⅞ 94	225	96⅞	96⅝	−0½	−0⅛	8.33
Finland Rep. of 8 86	150	98⅛	98⅞	−0⅛	−0½	8.30
Iberduero SA 9 90	100	99⅛	99⅞	−0⅛	0	9.07
Kobe, City of 7⅞ 89	150	93⅜	94⅛	−0⅛	−0⅛	8.98
Kobe, City of 8 90	100	99½	100	−0⅛	−0⅛	8.03
Mt. Bk. Denmark 8½ 90	150	98⅝	99⅜	−0⅛	−0⅛	8.85
Norway 7½ 85	250	98⅞	99½	−0⅛	−0⅛	7.73
OKB 7⅞ 89	100	94½	95¼	−0⅛	−0⅛	8.20
OKB 8⅛ 92	150	98⅝	99⅜	−0½	−0⅛	8.38
Oslo, City of 8¾ 90	90	102¼	102⅞	−0⅛	−0½	8.36
Sweden 9⅝ 87	200	105⅝	106⅜	−0⅛	−0⅛	8.50
World Bank 8 90	700	97½	98¼	−0⅛	−0⅛	8.32
World Bank 8⅞ 90	250	96	96½	−0⅛	−1⅛	8.46
World Bank 10 88	150	106⅜	107⅛	+0⅛	−0⅛	8.37
World Bank 10 90	200	109⅛	109⅞	−0⅛	−0½	8.50

Average price changes... On day −0⅛ on week −0⅛

SWISS FRANC STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Austria Rep. of 5⅝ 90	100	*98	98½	+0⅛	−0½	5.61
Bergen, City of 4⅝ 81	40	*†91½	92	−0⅛	−1⅛	5.79
Bergen, City of 8 90	50	*102	102½	0	−0⅛	5.69
BMW Overseas 4¾ 91	100	*90½	91	+0⅛	−0⅛	5.38
Buhrm'n-Tetterode 7 90	40	*104¾	105¾	+0⅛	+0⅛	6.29
Caisse Nat. Tele. 4⅝ 89	100	*92¾	93¼	−0⅛	0	5.36
Copenhagen 4½ 91	60	*85¾	86¼	−0⅛	−1⅞	6.30
Council of Eur 5 89	100	*95	96½	+0½	−0⅛	5.68
Denmark 5¾ 90	80	*99⅛	99⅞	−0⅛	−0⅛	5.80
EIB 4½ 94	100	*84½	85	+0⅛	−0⅞	6.02
Elet. de France 4⅝ 89	100	*92¾	93¼	0	−0⅞	5.31
F. G. H. Hypo. Bk. 6 90	50	*†102¾	103¼	0	0	5.59
Finland Rep. of 5¾ 90	20	*94	94½	0	−0⅞	6.42
GZB 4¾ 89	100	*96½	97	+0⅛	−2⅛	6.20
Hilti 4½ 91	35	*†91	92	−0½	−1⅛	5.28
Int.-Amer. Dev. 4½ 89	100	*91½	92	+0⅛	0	5.71
Int.-Amer. Dev. 7 90	80	*105⅞	106	+0⅛	+0⅛	6.18
Jutland Tele. 5½ 90	50	*98½	99	+0⅞	+0⅛	5.67
Malaysia 5 89	80	*†88	89	+0⅛	−0½	6.73
Newag 5⅝ 90	80	*101⅜	101⅞	+0⅛	−0⅛	5.53
Nippon Tel. & T. 4⅛ 89	100	*†93½	94	+0⅞	−0⅞	5.13
Norges Komm. 4½ 91	100	*87¾	88¼	−0⅛	−1⅞	5.88
OKB 4¾ 91	100	*†88½	89	−0⅛	−0½	5.78
OKB 6 90	100	*103⅛	103⅝	+0⅛	−0½	5.50
Oslo, City of 4¾ 91	100	*87½	88	+0⅛	−1⅛	5.91
Philips Lamps 5¼ 92	100	*99⅛	99⅝	+0⅛	−0⅛	5.31
Sekisui Pre. Hms. 6 90	80	*103⅛	103⅝	0	−0½	5.54
Shikoku El. Pwr. 4¾ 89	100	*93⅛	93⅝	−0½	−0⅛	5.70
World Bank 4⅛ 89	150	*†88½	89	−0½	−1⅛	6.03
World Bank 4⅛ 91	100	*88⅞	89⅛	−0½	−1⅛	6.00

Average price changes... On day +0⅛ on week −0⅞

YEN STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Australia 5.6 83	30	91⅜	92⅜	0	0	8.71
Australia 6⅞ 88	20	87⅞	88⅜	0	−0⅛	8.69
EIB 7⅛ 89	12	96⅝	97⅜	+0⅛	−0½	8.21
Finland 5.6 83	10	91	92	0	0	8.82
Finland 5.8 88	10	87⅞	88⅞	0	+0⅛	9.00
Finland, Rep. of 8⅛ 87	15	97⅛	98⅛	0	+0⅛	8.79

Average price changes... On day 0 on week 0

OTHER STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Bell Canada 10⅝ 86 C$	60	92½	93¼	−0⅛	−0⅛	12.49
CIBC 13½ 85 C$	50	99⅞	100⅜	0	−0½	13.41
CIBC 11½ 85 C$	60	95⅝	96⅜	+0⅛	−0⅛	12.63
Federal Dev. 11½ 90 C$	60	89⅛	89⅞	−0⅛	−0½	13.47
Fst. Can. Inv. 10 84 C$	50	90⅜	91⅞	−0⅛	−0½	13.77
GMAC 12 85 C$	50	†95⅝	96⅜	0	−1⅛	13.22
R. Bk. Canada 10 86 C$	40	91⅛	91⅞	0	−⅛	12.13
Tordom Cpn. 13½ 85 C$	30	99½	100¼	−0½	−0⅛	13.48
M. Bk. Dmk. 9 91 EUA	25	94	95⅛	0	+0⅛	9.80
SOFTE 8⅛ 89 EUA	40	89⅛	90	+0⅛	+0⅛	10.15
U. Bk. Nwy 9½ 90 EUA	18	99¼	100½	0	−0½	9.50
Algemene Bk. 8½ 84 Fl	75	95½	96	0	−0⅞	9.58
Algemene Bk. 10½ 87 Fl	400	99⅛	99⅞	−0⅛	−0⅞	10.31
Alk. Mess & H. 10 85 Fl	75	99⅛	100⅛	0	−1⅛	9.99
Heineken NV 10 87 Fl	75	99⅛	100⅛	+0⅛	−0⅛	10.01
Norway 8½ 84 Fl	100	96	96½	0	−0⅛	9.40
Philips Lamps 8½ 84 Fl	75	95⅞	96⅜	+0⅛	0	9.63
Aero Paris 13⅛ 87 FFr	150	99⅛	100⅛	+0⅛	0	13.08
Air France 11 84 FFr	120	96	97	−0⅛	−0⅛	12.16
CECA 14⅛ 88 FFr	150	104⅜	105⅞	−0½	−0⅛	12.78
Finland 11 84 FFr	80	93⅛	94⅛	+0⅛	0	12.92
Finland 11½ 89 FFr	70	92⅛	93½	−0⅛	−0⅛	12.84
Gaz de France 11 84 FFr	150	94⅛	95⅛	−0⅛	−0⅛	12.48
IBM France 11⅛ 84 FFr	120	95	96	−0⅛	−0⅛	13.27
Renault 9⅝ 85 FFr	100	87⅛	88⅛	−0⅛	−0⅛	13.17
Solvay et Cie 9⅝ 87 FFr	125	84⅛	85⅛	−0⅛	−0⅛	13.30
Utd. Mex Sts. 14 85 FFr	150	100⅜	101⅜	+0½	0	13.51
Beneficial Fin. 14⅛ 90 £	20	98⅛	99⅛	−0⅛	−0⅛	14.41
Citicorp O/S 13½ 90 £	50	98⅛	98⅞	−0⅛	−0⅛	13.73
EIB 11½ 91 £	25	89½	90⅛	0	+1⅛	13.30
Fin. for Ind. 12½ 89 £	30	94½	95⅛	−0⅛	−0⅛	13.48
Fin. for Ind. 14⅛ 89 £	20	101⅛	101⅞	−0⅛	−0⅛	14.11
Gen. Elec. Co. 12⅛ 89 £	50	95⅞	96½	0	−0⅛	13.25
Peugeot SA 14 90 £	23	97⅛	98½	−0⅛	−1⅛	14.35
Rothschild 14⅛ 90 £	12	98⅛	99⅛	−0⅛	−0⅛	14.46
Swed. Ex. Cr. 15⅛ 85 £	20	102⅞	103½	0	+0⅛	14.20
Banabras 8⅛ 90 KD	7	†93	93½	0	0	9.33
CCCE 8⅛ 91 KD	10	†94	94½	0	0	8.98
Sonatrach 8⅛ 90 KD	12	†92	92½	0	0	9.77
Akzo 9⅛ 87 LuxFr	500	93⅛	94⅛	0	+0⅛	10.56
Euratom 8 87 LuxFr	500	87⅛	88⅛	0	0	10.52
Euratom 9⅛ 88 LuxFr	500	97	98	0	0	10.23
EIB 9⅛ 88 LuxFr	500	97⅛	98⅛	0	0	10.05
Volvo 9⅞ 87 LuxFr	500	96	97	−0½	+0⅛	10.45

FLOATING RATE NOTES	Spread	Bid	Offer	C.dte	C.cpn	C.yld
Allied Irish Bk. 5⅛ 87	0½	98	98½	2/11	10.44	10.62
Bank of Ireland 5⅞ 89	‡0⅛	97⅞	98⅛	21/11	11⅝	11.91
Bank of Tokyo 5⅛ 89	‡0⅛	97	97½	25/10	9⅛	9.51
Barclays O/S Inv. 5 90	0⅛	97½	98	13/12	9⅛	9.85
Bergen Bk. A/S 6 89	‡0⅛	97½	98	29/11	12⅛	12.53
Bilbao Int. NV 5⅛ 80	0⅛	98⅛	97⅛	29/11	10.06	10.37
Citicorp O/S F. 83	$10	98⅛	99⅛	23/11	11.44	11.49
Citicorp O/S F. 84	‡0	98⅛	99⅛	30/9	11.94	12.06
C. Itoh 5⅛ 87	0⅛	98⅛	99⅛	18/9	18.44	18.51
Co-operative Bk. 6 85	0⅛	98⅛	98⅞	15/11	11.44	11.63
Creditanstalt 5½ 81	‡0⅛	97⅞	98⅛	14/9	8.44	8.62
CNT 5⅛ 88	‡0⅛	100	100½	16/10	18⅛	18.08
GZB 5½ 89	‡0⅛	98⅛	99	1/11	9.81	9.94
Jugobanka 8 89	0⅞	91⅞	93⅛	23/11	11⅞	12.60
Ind. Bank Japan 5⅛ 87	0⅛	98⅛	99⅛	16/10	18⅛	18.62
Lloyds Eurofin 8 ... £	0⅛	96⅞	97	3/11	15⅛	16.28
LTCB Japan 5⅛ 85	0⅛	98⅛	98⅞	13/12	8⅛	8.76
LTCB Japan 5⅛ 89	0⅛	97⅛	98⅛	7/12	10⅛	10.32
Mfrs. Han. O/S 5⅛ 94	‡0⅛	97⅞	98⅛	30/11	12⅛	12.39
Midland Intl. Fin. 5 89	0⅛	97½	98	25/1	8.69	8.91
Midland Intl. Fin. 5⅛ 92	0⅛	97⅜	98⅛	6/12	10⅛	11.10
Nacional Fin. 6⅛ 85	0⅛	97⅛	98	25/11	9.69	9.91
Nat West 5⅛ 94	‡0⅛	99	99⅛	11/10	18⅛	18.77
Nippon Credit 6½ 86	0⅛	97½	98	12/1	9.5e	8.78
Nippon Credit 6⅛ 87	‡0⅛	98⅛	98⅞	6/11	10⅞	11.04
Royal Bk. Scot 5⅛ 94	‡$0⅛	98⅛	99⅛	11/10	9.31	9.42
Soc. C. de Bque 5⅛ 87	0⅛	98⅛	99⅛	3/10	20.06	20.29
Standard Chart 5⅛ 90	0⅛	99⅛	100	6/9	17⅛	17.29
Svenska Hndlsbk 5 97	0⅛	98	98½	15/1	10	10.18
Swedes 87	‡0⅛	98⅛	98⅞	18/10	9.56	9.81
Williams & Glyn 5⅛ 91	0⅛	98⅛	99⅛	14/9	18⅛	18.71
Bq. S. d'Alg. 4⅛ 89 SF	0⅛	*†89	90	18/12	6⅛	6.84

Average price changes... On day 0 on week +0⅛

CONVERTIBLE BONDS	Cnv. date	Cnv. price	Bid	Offer	Chg. day	Prem
AGA Aktiebolag 7⅞ 89	10/79	146	†116	117	−2	−7.46
Ajinomoto 7⅞ 95	2/80	615.5	123⅞	124⅛	+0⅛	−2.86
Alco Int. Fin. 8⅛ 94	1/80	40	93	94⅛	−0⅛	−13.48
Apache I. Fin. 8⅛ 95	12/80	21.12	137	138⅛	+6⅛	−4.59
Blocker Energy 8⅛ 95	1/81	21.87	107⅛	109	−0⅛	−4.82
Canon 8⅛ 94	8/79	570	116⅞	117⅞	+2	2.83
Credit Suisse 4⅛ 93	10/79	1278	113⅛	115⅛	−0⅛	3.27
Daiei Inc. 6½ 94	11/79	827.3	97⅛	98⅛	−0⅛	20.05
OOKK 11 90	4/80	324	106⅞	106⅞	+0⅞	12.50
Dynalectron 8⅛ 95	5/80	12.22	110⅛	112⅛	−3½	1.83
Enserch Fin. 8⅛ 34	7/80	30.25	136	136⅛	+4½	0.02
INA Overseas 8⅛ 2000	4/81	42	98	99	−0⅛	4.73
Inchcape Ltd. 8 35	2/81	4.56	107⅛	108⅛	0⅛	−0.04
Meidensha Elec. 7 84	12/79	210	110⅛	111⅛	+2⅛	−1.78
MEPC 8⅛ 98	2/ST	2.47	111	112	−0⅛	6.72
Mitsubishi Co. 8⅛ 94	10/79	549.1	132⅛	134⅛	+0⅛	−0.57
Ricoh 6⅛ 95	4/80	604	102⅛	103⅛	+0⅛	2.73
SBC 6⅛ 90	4/80	200	100	101	−0⅛	4.39
Toshiba Cpn. 7⅛ 94	10/79	198	110⅛	111⅛	+0⅛	−1.64
Union Bk. Switz. 6 89	2/80	121.4	98⅛	99⅛	−0⅛	0.63
Fujitsu 5 84 DM	7/79	475	114⅛	115⅛	+3	0.38
Sharp Corp. 6⅛ 88 DM	6/80	595	109⅛	110⅛	+0⅛	0.09
Uny Co. 6⅛ 85 DM	11/79	1071	97⅛	97⅛	+0⅛	21.83

* No information available—previous day's price.
† Only one market maker supplied a price.

Straight Bonds: The yield is the yield to redemption of the mid-price; the amount issued is in millions of currency units except for Yen bonds where it is in billions. Change on week=Change over price a week earlier.

Floating Rate Notes: Denominated in dollars unless otherwise indicated. Coupon shown is minimum. C.dte=Date next coupon becomes effective. Spread=Margin above six-month offered rate (‡ three-month; § above mean rate) for U.S. dollars. C.cpn=The current coupon. C.yld=The current yield.

Convertible Bonds: Denominated in dollars unless otherwise indicated. Chg. day=Change on day. Cnv. date=First date for conversion into shares. Cnv. price=Nominal amount of bond per share expressed in currency of share at conversion rate fixed at issue. Prem=Percentage premium of the current effective price of acquiring shares via the bond over the most recent price of the shares.

FT UNIT TRUST INFORMATION SERVICE

AUTHORISED UNIT TRUSTS

Abbey Unit Tst. Mngrs. (a)
72-80, Gatehouse Rd., Aylesbury 0296 5941

Abbey Amer. Gth. Tst.	51.3	55.2	+0.2	2.63
Abbey Capital	43.8	47.3	+0.1	3.18
Abbey General	55.0	59.4	+0.2	5.29
Abbey Gilt & F.I. Tst.	114.2	120.2	+0.3	11.38
Abbey Income	35.2	38.1	+0.1	9.08
Abbey W'Wide Bd Tst.	93.3	98.7	+0.5	4.79
Abbey Inv. Tst. Fnd.	46.8	50.6	+0.3	5.02
Equitas Prog. Trust	83.3	90.1	+0.5	4.78

Allen Harvey & Ross Unit Tst. Mngrs.
45, Cornhill, London EC3V 3PB. 01-623 6314.

AHR Gilt Trust	92.6	97.4	−0.1	12.63

Allied Hambro Ltd. (a) (g)
Hambro Hse., Hutton, Brentwood, Essex.
01-588 2851 or Brentwood (0277) 211459

Balanced Funds

Allied 1st	87.7	93.4	+0.7	5.82
Brit. Inds. Fund	78.6	84.1	+0.6	4.38
Growth & Income	49.2	52.6	+0.5	5.29
Elect. & Ind. Dev.	44.0	47.1	+0.3	5.30
Allied Capital	94.4	101.0	+0.7	4.41
Hambro Fund	135.7	145.2	+1.4	5.98
Hambro Acc. Fund	172.6	184.7	+1.3	4.87

Income Funds

High Yield Fd.	65.5	70.1	+0.4	9.88
High Income	77.7	83.1	+0.4	7.64
A. H. Eq. Inc.	45.5	48.7	+0.3	7.45
Govt. Secs.	26.3	27.4	+0.1	11.61

International Funds

International	32.5	34.8	+0.5	3.10
Pacific Fund	55.0	58.9	+0.7	2.07
Secs. Of America	65.7	70.3	+0.7	2.56

Confederation Funds Mgt. Ltd. (a)
50, Chancery Lane, WC2A 1HE. 01-242 0282

Growth Fund	67.9	71.4	.....	4.06

For Cosmopolitan see Chieftain Fund Managers.

Craigmount Unit Tst. Mgrs. Ltd.
40 Bucklersbury, London EC4N 8BD. 01-248 4984

High Income	37.8	40.4	.....	11.19
North American	54.5	58.7	+0.8	2.92
Canadian Exempt*	60.9	64.3	.....	3.67
Canadian Trust	62.4	67.4	+0.5	2.67
Mid Mount High Inc.*	48.4	51.2	.....	9.43
Recovery	56.7	61.7	+0.9	7.01
Gilt Trust	44.9	46.9	+0.2	12.35

*Weekly dealing day Wednesday.

Crescent Unit Tst. Mngrs. Ltd. (a)(g)
4 Melville Cres., Edinburgh 3 031-226 4931

Cres. Amer. Fd.	34.2	36.9	+0.4	1.02
Cres. Internat'l.	68.3	73.7	+0.7	2.37
Cres. High. Dist.	42.5	45.9	.....	10.62
Cres. Reserves	51.3	55.4	+0.3	5.42
Cres. Tokyo	22.6	24.4	+0.6	1.00

Dartington Unit Trust Mngt. Ltd.
Bridge Chambers, Barnstaple, Devon 0271 76324

Total Perf. Unit Tst.	24.0	25.5	.....	12.20

Discretionary Unit Fund Managers
Bilbao Hse, 36/38 New Broad St, EC2M 1NU.
01-638 4485

Disc. Inc. Sept. 12	225.5	240.5	.....	5.48

E. F. Winchester Fund Mngt. Ltd.
44, Bloomsbury Square, WC1A 2RA 01-623 8893

Great Winchester	17.3	19.1	.....	7.60
Gt. Winchester O'seas	23.8	26.4	.....	4.22

Emson & Dudley Tst. Mngmnt. Ltd.
20b Albemarle St., W1. 01-493 3211

Emson Dudley Tst.	82.1	88.3	.....	6.00

Equity & Law Un. Tr. M.♥ (a)(b)(c)
Amersham Rd., High Wycombe. 0494 33377

Equity & Law	89.2	93.8	+0.7	4.66

Fidelity International Management Ltd.
62-63, Queen St., London, EC4R 1AD. 01-248 4891

[illegible]

INSURANCE PROPERTY BONDS

Provincial Life Assurance Co. Ltd.
222 Bishopsgate, EC2. 01-247 6533

Prov. Managed Fd.	152.1	160.2	+0.7	—
Prov. Cash Fd.	124.9	131.5	.....	—
Gilt Fund	137.9	145.2	−0.6	—
Property Fund	129.8	136.7	.....	—
Equity Fund	141.2	148.7	+1.3	—
Fxd. Int. Fund	115.3	121.4	−0.2	—

Prudential Pensions Limited♦
Holborn Bars, EC1N 2NH. 01-405 9222

Equity Fd. Aug. 20	34.46	35.53	.....	—
Fixed Int. Aug. 20	22.28	23.27	.....	—
Prop. Fd. Aug. 20	39.73	40.94	.....	—

Reliance Mutual
Tunbridge Wells, Kent. 0892 22271

Rel. Prop. Bds.		292.3	.....	—

Rothschild Asset Management
St. Swithins Lane, London EC4. 01-626 4356

N.C. Prop.	156.2	166.2	.....	—

Next sub. period Sept. 30/Oct. 15

Royal Insurance Group
New Hall Place, Liverpool. 051-227 4422

Royal Shield Fd.	191.9	203.0	.....	—

Save & Prosper Group♥
4, Gt. St. Helen's, Lndn., EC3P 3EP. 01-554 8899

Bal. Inv. Fd.	161.7	171.2	+0.9	—
Property Fd.*	201.4	213.2	.....	—
Gilt Fd.	144.1	152.5	+0.5	—
Deposit Fd.†	147.2	155.8	.....	—
Comp. Pens. Fd.†	284.8	301.4	.....	—
Equity Pens. Fd.	280.2	296.6	+1.2	—
Prop. Pens. Fd.*	248.5	263.0	.....	—
Gilt Pens. Fd.	122.0	129.2	+0.6	—
Depos. Pens. Fd.†	129.9	137.5	.....	—

*Prices on Sept. 10.
†Weekly Dealings.

Schroder Life Group♥
Enterprise House, Portsmouth. 0705 27733

Equity	301.7	[illegible]	[illegible]	—
Fixed Int.	165.3	[illegible]	[illegible]	—
Managed	173.0	[illegible]	[illegible]	—

[illegible]

OFFSHORE & OVERSEAS FUNDS

Albany Fund Management Limited
P.O. Box 73, St. Helier, Jersey. 0534 73933

Albany $ Fd. (CI)	US$159.05	161.01	.....	1.38

Next dealing Sept. 26.

Alexander Fund
37, rue Notre-Dame, Luxembourg.

Alexander Fund		US$12.81	.....	—

Net asset value Sept. 10.

Allen Harvey & Ross Inv. Mgt. (C.I.)
1 Charing Cross, St. Helier, Jsy., C.I. 0534-73741

AHR Dollar Inc. Fd.	US$10.22	10.25	.....	10.74
AHR Gilt Edg. Fd.	£12.20	12.27	−0.12	13.85

Alliance International Dollar Reserves
c/o Bank of Bermuda, Hamilton, Bermuda.
Adv.: ACMI, 319 High Holborn WC1. 404 0377
Daily dealings: Sept. 12-14 0.000749 (9.5%pa)

Arbuthnot Securities (C.I.) Limited
P.O. Box 284, St. Helier, Jersey. 0534 76077

East & Intl. Tst. (CI)	121.0	127.0	.....	2.95

Dealing day Thurs.

Gov't Secs. Tst. (CI)	84.3	86.7	+0.2	14.37

Daily Dealings.

Sterling Fd.	115.3	115.4	.....	—

Dealing on Wed.

Bank of America International S.A.
35 Boulevard Royal, Luxembourg G.D.

Wldinvest Income	US$109.07	109.65	.....	9.12

Prices at Sept. 11. Next sub. day Sept. 17.

Banque Bruxelles Lambert
2, Rue De la Regence B 1000 Bruxelles

[illegible]

Continued on previous page

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Five to Fifteen Years

[illegible]

Over Fifteen Years

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Undated

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INTERNATIONAL BANK

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CORPORATION LOANS

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COMMONWEALTH AND AFRICAN LOANS

91	82¼	Aust. 5½pc '81-82	88xd	......	6.23	14.11
85¼	72½	Do. 6pc 1981-83	84	......	7.28	12.84
67	58	N.Z. 7¼pc 1938-92	65½	......	11.22	13.37
81½	72	Do. 7½pc '83-86	80¾	......	9.62	12.74
95¼	88	Sth. Africa 9½pc '79-81	96¼	......	10.23	16.49
160	95	S. Rhod. 2½pc Non-Ass.	100	-1	—	28.91
169	133	Do. 6pc '78-81 N.-As.	145	-1	—	27.87

LOANS

Public Board and Ind.

[illegible]

Financial

[illegible]

FOREIGN BONDS & RAILS

[illegible]

AMERICANS

[illegible]

CANADIANS

11⅛	850p	Hudson's Bay	950	+15	$1.20	—	4.9
14¼	925p	Hud. B. Oil G. $2½	12½	......	h57½c	—	1.7
21⅞	13⅛	Imperial Oil	14⅜	+¼	$1.40	—	3.6
14	355p	Inco	11	-½	72c	—	2.5
565p	425p	Int. Nat. Gas $1	545p	+10	$1.00	—	6.9
495p	250p	Massey Ferg.	275p	+20	—	—	—
200p	100p	Place Gas $1	105p	......	—	—	—
14¾	10½	Rio Algom	13	+1½	$1.50	—	4.4
20	14½	Royal Bk. Can. $2	19⅜	+⅛	$2.56	—	5.0
25⅞	15¼	Seagram Co. C$1	25⅞	+1½	$US1.10	—	1.9
12	890p	Tor. Dom. Bk. $1	10⅞	-⅛	$1.44	—	5.0
10½	815p	Trans Can. Pipe	830p	+5	$1.16	—	5.3

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[illegible]

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Diamond and Platinum

[illegible]

Central African

[illegible]

MINES—Continued

Australian

1980 High	Low	Stock	Price	+ or —	Div. Net	C'vr	Y'ld Gr's
25	21	Acmex 50c	22	......	—	—	—
24	12	ACM 20c	18	—2	—	—	—
138	52½	Bond Corp.	122	......	h02.8c	2.2	1.2
156	88	Bougainville I Kna.	124	—3	[illegible]	1.0	10.7
356	230	CRA 50c	314	+6	¶Q15c	2.1	0.4
25	11½	Canada Northwest	18½	......	—	—	—
42	0	Carr Boyd 20c	38	......	—	—	—
£38	£15¼	Central Pacific	£38	+1	—	—	—
41	17	Cultus Pacific N.L.	31	......	—	—	—
52	20	Eagle Corp. 10c	40	......	—	—	—
28	15¾	Endeavour 20c	26½	+1½	—	—	—
500	175	G. M. Kalgoorlie 25c	500	+5	Q13c	ф	1.3
46	15	Great Eastern	24½	......	—	—	—
245	130	Hampton Areas 10p	245xc	+3	h2.25	2.4	1.3
204	30	Haoma Gold N.L.	166	+14	—	—	—
62	15	Intl. Mining	60	......	—	—	—
720	80	Leichardt Expln.	160	......	—	—	—
30	7	Metals Energy	18	—2	—	—	—
84	41	Metals Ex. 50c	84	+8	Q3c	ф	1.8
312	187	M.I.M. Hldgs. 50c	209	+33	Q30c	ф	5.4
21	7	Minefields Expl. 25c.	17	+1	—	—	—
155	60	Mount Lyell 25c	100	......	Q15c	ф	8.1
28	15	Newmetal 20c	20	......	—	—	—
55	13	Nickelore N.L.	39	......	—	—	—
207	137	North B. Hill 50c.	196	+3	Q18c	ф	4.8
107	44½	Nth. Kalgurli	105	—2	—	—	—
165	90	Nth. Mining Corp.	130	......	—	—	—
184	24	N. West Mining N.L.	144	+4	—	—	—
235	144	Oakbridge $A1	190	......	Q12c	4.7	3.3
153	70	Otter N. L.	130	+5	—	—	—
240	128	Pacific Copper	208	—2	—	—	—
465	255	Pancont'l 25c	355	+5	—	—	—
78	42	Paringa M&Ex 5p	63	+2	—	—	—
525	335	Peko-Wallsend 50c	525	+10	t017.5c	ф	1.7
230	140	Seltrust A	158	—2	—	—	—
£14¼	575	Southern Pacific	£14⅛	......	—	—	—
100	31	Swan Resources 20c.	100	+10	—	—	—
34	8	West Coast 25c	20	—2	—	—	—
313	177	Westn. Mining 50c	298	+11	Q14c	ф	2.4
30	10	Westmex	17	+3	—	—	—
108	56	Whim Creek 20c	95	......	—	—	—
34	10½	York Resources	27	......	—	—	—

Tins

1980 High	Low	Stock	Price	+ or —	Div. Net	C'vr	Y'ld Gr's
25	14	Amal Nigeria 1p	17	......	j6.0	—	—
370	255	Ayer Hitam $M1	340	—3	±0290c	0.9	‡
67	42	Berali Tin	67	......	4.5	3.2	9.6
300	149½	Berjuntai $M1	270	......	Q85c	ф	6.6
230	150	Geevor	155	......	8.4	1.9	7.7
12½	10	Gold & Base 12½p	12½	+½	—	—	—
650	310	Gopeng Cons.	620	+30	†25.0	1.8	5.8
435	280	Hongkong	430	......	‡35.87	ф	‡
132	90	Idris 10p	132	......	14.0	1.2	15.2
15	12½	Jantar 12½p	14	......	1.5	ф	15.3
115	64	Kamunting $M0.50	105xd	+½	Q80c	1.0	0.0
350	150	Killinghall $M1	350	......	‡‡Q50c	ф	2.9
125	48½	Malay Dredging 10c	128	—5	[illegible]	2.6	1.8

[illegible]

Copper

[illegible]

Miscellaneous

[illegible]

1980 High	Low	Stock	Price	+ or —	Div. Net	C'vr	Y'ld Gr's
180	80	††Hemerdon 10c.	85	......	—	—	—
585	325	Northgate C$1	490	+18	—	—	—
487	327	R.T.Z.	482	—5	15.0	3.2	4.4
40	16	Robert Mines	40	+3	—	—	—
112	91	††SPO Minerals 10p	94	......	—	—	—
58	26	Sabina Inds. C$1.	45	+5	—	—	—
51	31	††SWCM 10p	40	......	—	—	—
650	411	Tara Expln. $1	585	......	—	—	—

NOTES

Unless otherwise indicated, prices and net dividends are in pence and denominations are 25p. Estimated price/earnings ratios and covers are based on latest annual reports and accounts and, where possible, are *updated on half-yearly figures*. P/Es are calculated on "net" distribution basis, earnings per share being computed on profit after taxation and unrelieved ACT where applicable; bracketed figures indicate 10 per cent, or more difference if calculated on "nil" distribution. Covers are based on "maximum" distribution; this compares gross dividend costs to profit after taxation, excluding exceptional profits/losses but including estimated extent of offsetable ACT. Yields are based on middle prices, are gross, adjusted to ACT of 30 per cent and allow for value of declared distribution and rights.

- ● "Tap Stock.
- * Highs and Lows marked thus have been adjusted to allow for rights issues for cash.
- † Interim since increased or resumed.
- ‡ Interim since reduced, passed or deferred.
- ‡‡ Tax-free to non-residents on application.
- ф Figures or report awaited.
- †† Unlisted security.
- ‡ Price at time of suspension.
- ¶ Indicated dividend after pending scrip and/or rights issue: cover relates to previous dividends or forecasts.
- ♦ Merger bid or reorganisation in progress.
- ♣ Not comparable.
- ♠ Same interim: reduced final and/or reduced earnings indicated.
- § Forecast dividend; cover on earnings updated by latest interim statement.
- ‡ Cover allows for conversion of shares not now ranking for dividends or ranking only for restricted dividend.
- ☆ Cover does not allow for shares which may also rank for dividend at a future date. No P/E ratio usually provided.
- ♥ Excluding a final dividend declaration.
- ❄ Regional price.
- ‖ No par value.

§§ Yield based on assumption Treasury Bill Rate stays unchanged until maturity of stock. a Tax free. b Figures based on prospectus or other official estimate. c Cents. d Dividend rate paid or payable on part of capital; cover based on dividend on full capital. n Redemption yield. *f Flat yield. g Assumed dividend and yield. h Assumed dividend and* yield after scrip issue. j Payment from capital sources. k Kenya. m Interim higher than previous total. n Rights issue pending. q Earnings based on preliminary figures. s Dividend and yield exclude a special payment. *t Indicated dividend:* cover relates to previous dividend, P/E ratio based on latest annual earnings. u Forecast dividend: cover based on previous year's earnings. v Tax free up to 30p in the £. w Yield allows for currency clause. y Dividend and yield based on merger terms. z Dividend and yield include a special payment: Cover does not apply to special payment. A Net dividend and yield. B *Preference dividend passed or deferred.* C Canadian. E Minimum tender price. F Dividend and yield based on prospectus or other official estimates for 1979-80. G *Assumed dividend* and yield after pending scrip and/or rights issue. H Dividend and yield based on prospectus or other official estimates for 1980-81. K Figures based on prospectus or other official estimates for 1979-80. M Dividend and yield based on prospectus or other official estimates for 1980. N Dividend and yield based on prospectus or other official estimates for 1981. P Figures based on prospectus or other official estimates for 1980-81. Q. Gross. T Figures assumed. Z Dividend total to date.

Abbreviations: xd ex dividend; xc ex scrip issue; xr ex rights; xa ex all; xR ex capital distribution.

REGIONAL MARKETS

The following is a selection of London quotations of shares previously listed only in regional markets. Prices of Irish issues, most of which are not officially listed in London, are as quoted on the Irish exchange.

			IRISH		
Albany Inv. 20p	35	......	Conv. 9% '80/82	£93⅝	......
Bertam	15	......	Nat. 9¾% 84/89	£82⅝	+⅛
Bdg'wtr. Est. 50p	450	......	Fin. 13% 97/02	£91⅞	+⅛
Craig & Rose £1	£11	......	Alliance Gas	51	......
Fife Forge	35	......	Arnott	200	......
Finlay Pkg. 5p	28	+9	Carroll (P.J.)	70	+1
Graig Ship. £1	£13	+1	*Clondalkin*	120	......
Higsons Brew	77	......	Concrete Prods.	80	......
Holt (Jos) 25p	260	......	Helton (Hldgs.)	29	......
I.O.M. Stm. £1	152	—....	Ins. Corp.	275	......
Pearce (C. H.)	465	......	Irish Ropes	40	......
Peel Mills	45	......	Jacob	31	......
Sheff. Refrshmt.	102	......	T.M.G.	75	......
Sindall (Wm.)	140	......	Unidare	77	......

OPTIONS

3-month Call Rates

Industrials					
		I.C.I.	27	Utd. Drapery	6½
A. Brew	7	"Imps"	6½	Vickers	12
BOC Intl.	6	I.C.L.	14	Woolworths	5½
B.S.R.	4½	Inveresk	4	**Property**	
Babcock	8	Ladbroke	15		
Barclays Bank	34	Legal & Gen.	15	Brit. Land	7
Beecham	18	Lex Service	8	Cap. Counties	9
Blue Circle	25	Lloyds Bank	24	Land Secs.	24
Boots	16	"Lofs"	3½	MEPC	17
Bowaters	15	London Brick	6	Peachey	13
B.A.T.	20	Lucas Inds.	17	Samuel Props.	12
Brown (J.)	6	"Mams"	14	Town & City	2
Burton 'A'	10	Mrks. & Spncr	8		
Cadburys	5½	Midland Bank	26	**Oils**	
Courtaulds	8	N.E.I.	5		
Debenhams	8	Nat. West. Bank	27	Brit. Petroleum	32
Distillers	17	P & O Dfd.	18	Burmah Oil	20
Dunlop	7½	Plessey	14	Charterhall	10
Eagle Star	15	Racal Elect.	22	KCA	11
F.N.F.C.	2¼	R.H.M.	4½	Premier	13
Gen. Accident	21	Rank Org.	15	Shell	35
Gen. Electric	30	Reed Intnl.	16	Tricentrol	40
Glaxo	18	Sears	5	Ultramar	35
Grand Met.	12	Tesco	6		
G.U.S. 'A'	34	Thorn	23	**Mines**	
Guardian	23	Trust Houses	12	Charter Cons.	14
G.K.N.	20	Tube Invest.	23	Cons. Gold	40
Hawker Sidd	15	Unilever	40	Lonrho	8
House of Fraser	15	U.D.T.	5½	Rio T. Zinc	35

A selection of Options traded is given on the London Stock Exchange Report page

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FINANCIAL TIMES

Tuesday September 16 1980

£138m August trade surplus

BY DAVID MARSH

BRITAIN recorded a £138m surplus on the current account of the balance of payments in August, the fourth successive month in the black.

Unexpectedly buoyant exports, together with a drop in imports resulting from the recession and an increase in invisibles earnings, have produced a small overall surplus on current account during the first eight months of 1980. This contrasts with the Government's expectation only a few months ago that the current account would be in fairly large deficit this year.

The strength of the pound has contributed to a weakening of import prices which has benefited both the trade figures and the inflation rate in recent months.

The currency's firmness does not seem, however, to have significantly damaged export volume, which has been little changed lately. Sales to oil exporters and developing countries have risen, and exporters are also passing on fairly large price increases to foreign customers.

BALANCE OF PAYMENTS

£m seasonally adjusted	Visible trade	Invisibles	Current account
1978	−1,546	+2,166	+ 620
1979	−3,404	+1,541	−1,863
1980			
1st	− 632	+ 470	− 162
2nd	− 301	+ 233	− 68
June	+ 3	+ 77	+ 80
July	+ 261	+ 75	+ 336
Aug.	+ 63	+ 75	+ 138

Source: Department of Trade

Last month's surplus was below the record £336m recorded in July, but was well above June's £80m surplus, according to seasonally adjusted figures published yesterday by the Department of Trade.

Visible trade was in surplus in August — to the tune of £63m — for the third successive month. This works the longest run of monthly trade surpluses since 1971.

This has partly reflected Britain's move to oil self-sufficiency. The surplus in oil trade was £10m last month after £102m in July.

Net earnings on invisibles transactions — services, interest, profits and dividends and transfers — have been revised upwards. They are now thought to be running at about £75m per month, against earlier estimates of £50m.

The improved invisibles trend helps explain why the current account performance for the year as a whole will be significantly better than the £2.75bn deficit forecast by the Treasury in March.

For the first eight months of the year, the current account has swung into a surplus of £244m compared with a deficit of £1.2bn at the same stage last year.

Import volume, reflecting the fall in demand caused by the recession, dropped in the last two months by almost 2.5 per cent compared with May-June, and was 6.5 per cent below the average level of the third quarter last year. Imports of manufactured goods — especially cars—have fallen particularly.

Export volume dropped slightly last month from July's high levels, but has been broadly flat in recent months. The prices of exports have increased by an averaged 2.5 per cent in the latest quarterly period. But import prices have weakened lately and are down to around the levels at the start of the year.

Balance of trade table, Page 8

French seek £50m fast reactor fee from Britain

By David Fishlock, Science Editor

THE FRENCH Government has asked Britain for £50m as an entrance fee to a European project for design of a commercial fast-breeder type of nuclear reactor.

The figure of £50m was disclosed yesterday by Sir John Hill, chairman of the UK Atomic Energy Authority. He said it was partly to compensate the French Government for its investment in the half-finished 1,200 MW Superphenix fast reactor project in the Rhone Valley.

The French Government is paying half the cost of Superphenix, with the electricity supply industries of France, Italy and West Germany paying the other 50 per cent.

The £50m represents about one-tenth of the bill the French Government expects to pick up.

The request for an entrance fee—which is twice as high as that estimated by the Financial Times when it first disclosed the French offer a month ago—has presented a major political headache for the British Government.

Parliament is not expected to take kindly to the idea of a cash payment roughly equal to one year's research and development on the fast reactor by the UKAEA, £80m in 1979-80, when by successive Governments it has been led to believe that Britain remained in the vanguard of the technology.

Sir John Hill said yesterday that he hoped the British Government would reply to the French proposal by the end of the year but stressed there had been no negotiations so far.

It was up to the Government first to set out its policy on the fast reactor and, if it wished to continue with commercial development, to state whether this should be by Britain alone or in collaboration with other nations, he said.

Sir John said it was simply not possible to negotiate a full technical collaboration with other countries yet retain commercial competition between them.

Sir John sent a strongly-worded protest about last week's Panorama programme on Dounreay, its fast-reactor development centre, to Sir Ian Trethowan, BBC director-general.

The letter accuses the BBC of manipulating the news by widely releasing the opinions of its own commentators to the Press well ahead of the programme—particularly in Scotland, where nuclear energy is an especially sensitive issue—without allowing the UKAEA to know what was being broadcast.

Sir John said yesterday that the Government would shortly make its own statement on the Panorama "revelations" that it had lost two fast-reactor fuel pins. He said the statement would not "bear any but the most tenuous relationship to what has been put to the public in the media in the early days of last week."

National executive to direct nuclear project, Page 6

THE LEX COLUMN

The game of the name

What's in a name? Not very much when it is Smith, Jones or Brown, but the name Rothschild is worth fighting for to judge by the intensity of the family feud which yesterday emerged in public at the annual meeting of Rothschild Investment Trust. At stake is the family name of the publicly quoted trust (chairman Jacob Rothschild) which has been steadily splitting away from the private bank holding company Rothschild Continuation (largest shareholder, Evelyn de Rothschild). Continuation sold almost all its remaining shares in RIT last month, but it still has one hold over RIT because of the latter's articles of association. What it boils down to is that Continuation can require the name Rothschild to be removed from the trust's title if Jacob Rothschild ceases to be director of Continuation and the bank. And it seems that the board of Continuation would very much like to see him go.

Continuation will only permit RIT to keep its name on the basis of a series of restrictions which the trust finds wholly unacceptable. So yesterday RIT set out its fall-back position, which essentially revolves around a continuing personal commitment by Jacob Rothschild to the trust. For at least five years it will have the man if not the name; although even here it seems the lawyers have decided that the trust can have an intermediate holding company called J. Rothschild, and perhaps more importantly the associated open-ended offshore Investment London and New York Investments (of which RIT has about half) proposes to call itself J. Rothschild International Investments.

Meantime Continuation is to find a purchaser for RIT's 11.4 per cent stake. On the basis of the recent periodic valuation by Peat Marwick this is worth £6.6m, making Continuation's total value (including Convertibles) just short of £60m. For comparison RIT is capitalised at over £80m, and at least it will now be freer to pursue its independent development without treading on the toes of the bank, N. M. Rothschild, although there are no plans to go directly into merchant banking as such.

There is, however, the problem of a new name; why not JR Investment Trust.

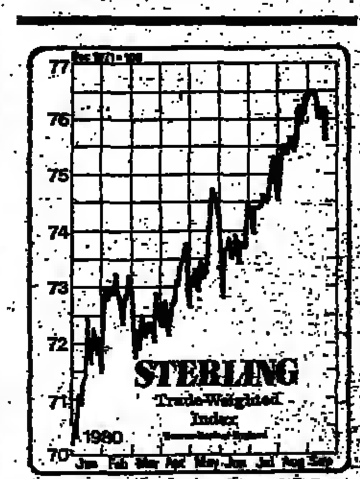
BHP

Net worth of Broken Hill Proprietary, Australia's largest company, continued its rapid climb last year, growing more than one quarter to nearly A$2.8bn. The latest annual report also shows the extent to which oil and gas have taken over as the main contributors to BHP's progress. Profits on oil and gas before financing charges rose 62 per cent to $200.7m, about two-thirds of the whole. Steel, in which BHP has a monopoly in Australia and in which it has invested 60 per cent of its capital, turned in a loss for the fifth time in the past six years.

Both steel and the related coal mining interests were badly affected by strikes last year but the importance of oil and gas will continue to rise as more of the group's reserves fall into the category in which the Australian Government allows producers a higher return.

Recently, the shares have been nudging their high of $15.30 for the year where they trade at more than 11 times 1979-80 profits. But analysts in Britain, where about 4.5 per cent of BHP's shares are held, are forecasting a further sustained period of rapid earnings growth.

Index fell 8.2 to 500.7



Simon Engineering

Considering the difficult background, Simon Engineering's figures for the first half of 1980 are commendable. Trading profits have been held at £6.6m and at the pre-tax level there is a 5 per cent advance to £7.6m thanks to higher interest on Simon's cash balances.

Roughly speaking, a deterioration in the UK part of the business — including exports from the UK—has been offset by a strong performance overseas, especially in process plant contracting, and at Unichem, the U.S. oil and gas services company. The exception to the general weak trend at home was once again provided by the bulk storage subsidiaries.

In the second half, some of the UK manufacturing businesses should show a recovery from the strike-hit autumn of 1979, and there has been loss elimination at Simon Container Machinery. But in general the order position is poor, and not improving. Demand is flat in the food machinery companies, while Simon Hartley—the important sewage and effluent treatment subsidiary—is suffering from public spending cuts. Moreover, the UK-based contracting subsidiaries are running short of work, particularly in petrochemicals.

As a result, Simon's profits for the year may be little different from last year's £18½m pre-tax, and it may be difficult to move off the plateau in 1981, given the present state of order books.

Still, the group's ability to ride out the recession more happily than many engineering companies is rapidly pushing the shares to a premium rating. At 277p, up 11p yesterday, they stand on 8½ times fully-taxed earnings, and the historic yield is a modest 5.9 per cent.

Trade figures

The City's recession-watchers had plenty to keep them busy yesterday, with three sets of statistics to study. The August trade figures showed another surplus on visible account, even if, at £63m, it was rather below some expectations. The British economy—as the July industrial output figures suggest—is weakening faster than overseas economies. So exports are managing to hold up, and import volume is still relatively low, although it rose sharply from the July level, and may pick up further once the importers' UK customers have got their stocks down.

The August retail sales figure showed a small rise over July, but this probably reflects nothing more than the unusually long summer sales in the shops, which will have upset the seasonal adjustment of this series.

Still, the gilt-edged market closed lower on the day, and equities were also down. The threatened dock strike gives some foretaste of the tussles that may be in store over pay this winter, and sterling fell 0.6 on its trade-weighted index to 75.6. In part this seems to reflect the foreign exchange market's expectation of weakness in the oil price, now that Saudi Arabia has postponed a reduction of output.

Peugeot and Fiat link to produce new engine

By Rupert Cornwell in Rome

FIAT, the Italian car manufacturer, and Peugeot of France, yesterday signed a far-reaching agreement to work together on a new jointly produced smaller sized engine.

The engine, Fiat said last night, would be entirely new in design, and developed to be as fuel-efficient as possible. The scale of output envisaged is around 1m units per year.

No decision has yet been taken on whether the eventual manufacturing plant will be sited in France or Italy, but production is expected to begin in 1984 or 1985.

The deal forms part of Fiat's drive to rationalise production of components—especially of so-called "core components"—to achieve the economies of scale necessary to survive in the harsh climate for major car companies likely in this decade.

The new engine, Fiat said, will be for vehicles at the lower end of the range, and feasibility studies have already begun.

Co-operation

The agreement carries a stage further the increasingly close co-operation between the Italian company and Peugeot. In February they decide to rationalise their respective opeartions in Argentina in a new company jointly controlled by the two groups. They are already collaborating in a project in Southern Italy to produce light commercial vehicles.

Peugeot, which also embraces Citroen and the former European operations of Chrysler, was Europe's largest car producer in 1979 with 2.34m units, while Fiat was fourth with 1.72m units. Both concerns have been particularly heavily hit by the current downturn in the international car market.

Last night's announcement coincided with the resumption of talks between Fiat's management and engineering union leaders, in an attempt to break the deadlock over Fiat's plans to make 14,469 workers in its car division redundant. This is a result of the present contraction in demand which is expected to last until the end of 1981.

Unclear

The outcome of these negotiations is unclear—as is the decision which the Italian Government is due (in theory at least) to take on the controversial question of the planned joint venture in Southern Italy between Alfa Romeo, the state-owned car manufacturer and Nissan motor company of Japan.

It seemed probable yesterday that a final ruling on the deal, which has been bitterly fought by Fiat, would come at a session tomorrow of the Government's industrial policy committee. But the situation could change, because of the entanglement of the Alfa Romeo question and the Fiat talks.

Iran blocks OPEC policy

BY RICHARD JOHNS AND MARTIN DICKSON IN VIENNA

IRAN EMERGED yesterday as the biggest stumbling block to a compromise on a new long-term pricing and production policy within the Organisation of Petroleum Exporting Countries.

At the opening session of a major OPEC trilateral conference — bringing together foreign, finance and oil Ministers — Iran took issue with other members over the agenda.

The move was symptomatic of Iran's dissatisfaction with proposals for a long-term strategy drawn up by a six-nation ministerial committee headed by Sheikh Ahmed Zaki Yamani, Saudi Arabian Minister of Oil. Theoretically, Iran is represented on it but has not participated since the revolution.

Mr. Ali Akhbar Moinfar, Iran's acting Minister of Oil, demanded that output levels should be made the first item on the agenda but was overruled by other members.

They had reached an understanding that the more contentious issues of realigning prices and setting levels of output, a prerequisite for a long-term policy, should be deferred to a meeting of the Oil Ministers scheduled for Wednesday.

Yesterday Mr. Moinfar claimed that OPEC was overproducing by 3m barrels a day. This contrasted with an estimate of 2.5m b/d given by Sr. Humberto Calderon Berti, Venezuelan Minister of Energy.

Iran's acute concern arises from the slump in its exports to the rate of no more than 1m b/d claimed by Mr. Moinfar. In current surplus conditions it has priced itself out of the market.

Sheikh Yamani said Saudi Arabia had not decided what its production level would be in the last quarter. Regardless of agreement, however, it is expected to lower it by some margin to help reduce the market surplus.

In an earlier outburst Mr. Moinfar objected to Mr. Saadoun Hammadi, Iraqi Foreign Minister, taking the chair of the conference in accordance with procedures. Mr. Moinfar said Iran should preside, a claim which reflected the bitter hostility between the two countries. To settle the dispute Algeria, host of the last conference, took the chair.

An OPEC summit is scheduled for Baghdad, capital of Iraq, in November, to approve a long-term strategy that Sheikh Yamani's committee has been working on since 1977.

A key element of a global strategy would be a system for the indexation of prices according to inflation, currency fluctuations and — to give revenue gains in real terms — the average growth rate of members of the Organisation for Economic Co-operation and Development.

On important element of a compromise would be for Saudi Arabia to reduce its output to 8.5m b/d maximum from the present ceiling of 9.5m b/d in return for adoption of the system recommended by the long-term strategy committee chaired by Sheikh Yamani.

Implementation of the system depends on OPEC realigning prices. Saudi Arabia's basic price of $28 per barrel compares with a median in the Gulf of $32 and a rate demanded by Iran for equivalent crude of $35.37.

Differences between members over the status of the expanded OPEC Special Fund, the capital of which is being increased from $4bn to $20bn, have not been resolved. Its main purpose is to ease the burden of high oil import costs in the Third World through provision of soft loans.

Venezuela, Algeria, Iran and Indonesia would like to see it upgraded into a fully-fledged development agency authorised to raise money on international markets.

Apart from Algeria, which is expected to be a borrower of money for the indefinite future, the other Arab members still apparently have some misgivings about strengthening its legal power because they favour bilateral aid programmes.

It has not been decided how the contributions to the enlarged capital should be shared. The understanding is that it should be calculated according to production levels of member states.

Polish unions plan to consolidate

BY CHRISTOPHER BOBINSKI IN WARSAW

FREE TRADE union activists from all over Poland will gather for the first time in Gdansk tomorrow to discuss setting up a national co-ordinating committee and other forms of inter-union co-operation.

The meeting marks an important stage in the consolidation of the free trade unions agreed to by the Polish Government after last month's nationwide strike.

Representatives from the 16 industrial centres where at least the skeleton of an independent union movement has been organised already will compare experiences and develop their organisation.

It is two weeks since the authorities conceded workers the right to set up their own unions alongside the officially controlled movement.

It is impossible to say how many workers are involved in the independent unions. Estimates for the Gdansk region range from 500,000 to 1m.

The movement is also growing fast in other parts and independent unions are being organised in the main industrial centres such as Katowice, Warsaw, Szczecin and Lodz.

In some places the local authorities are still refusing to recognise the workers' rights to set up independent unions. In Kielce, in the South a strike at the Iskra ball bearing plant is continuing on that issue.

The Polish press has published a temporary decree which sets out the rules under which the independent unions may register.

The decree says the new unions must register in the provincial law courts in Warsaw after the courts have examined the union's proposed statutes and declared them to accord with the State constitution.

Registration gives a union status in law. The court retains the right to de-register a union if "its activities or structure should conflict with the law."

Squalor and hope, Page 2

Foreign economic help

LOANS FROM Western banks and institutions and the Soviet Union have enabled Poland to fulfil its more than $7bn borrowing requirement for this year, according to Mr. Marian Krzak the new Finance Minister.

The Soviet Union has agreed to defer payment on an earlier $280m hard currency loan and to provide a new 10-year, low-interest, soft-currency loan worth the equivalent of $260m on top of the $550m worth of medium- and short-term hard currency credits arranged since May.

The Soviet Union has agreed to repeat assistance given to Poland after the 1970 and 1976 disturbances by agreeing to supply additional consumer goods, raw materials for light industry, 500,000 tons of wheat and other items worth around $155m. Mr. Krzak said that this showed the Soviet Union could be counted on by its allies when times became hard. But he admitted that he did not know whether further loans would be made.

British Airways to drop routes

BY MICHAEL DONNE, AEROSPACE CORRESPONDENT

BRITISH Airways is to cut some routes this winter and sell off aircraft as part of an attempt to eliminate rising cash losses stemming from a shortage of traffic. There will be no compulsory redundancies, however.

By the end of July, the airline had a pre-tax loss of £17m for the first four months of the financial year. This compared with a pre-tax profit of £42m for the same period last year.

Mr. Roy Watts, chief executive, said yesterday in a message to all staff: "We are facing a world-wide recession. Our home market is even more depressed. Competition is increasing.

Mr. Watts said that in the first four months of the financial year, there were 500,000 fewer passengers than in the same period the previous year. Revenue earned was £100m short of the target.

"We are in a very serious financial situation. If we allow it to continue, our whole future is at risk," he said.

Mr. Watts said various economies announced earlier this summer, including a 3,500 cut in staff through natural wastage and early retirement, would save over £50m.

The airline is cutting its capacity offered this winter by about eight per cent, saving another £20m.

The Concorde route to Bahrain and Singapore is being suspended from November 1 and this would save about £2m a year. The airline probably will not now take over the seventh Concorde, still owned by the Government.

Services this winter from Gatwick to Dusseldorf, Frankfurt and Zurich are to be suspended. Frequency of flights from Gatwick to Barcelona, Madrid, Malaga and Gibraltar will be reduced. Services from Gatwick to Copenhagen and Stockholm will be combined and the Birmingham-Copenhagen flights will be suspended.

Other changes include suspension of the London-Moscow-Tokyo route and the service to Georgetown, Guyana. Altogether, the airline will withdraw more than 50 flights a week this winter.

These changes will result in one Boeing 747 Jumbo jet being sold, while the VC-10 jet fleet will be cut back to two, which will be withdrawn in April.

Further savings of up to £5m in the fuel bill (running at £600m this year) will be made. Purchase of a sixth Chinook helicopter is being deferred.

Air fares cuts, Page 9

Continued from Page 1

Output

spending. The fall in the prices of some household goods and items of clothing between July and August tends to confirm this extension of special sales.

Compared with non-seasonally adjusted data for 1979 the value of retail sales this August was 10 per cent higher than a year earlier. In the first eight months of this year the average value of sales was 13 per cent higher than in the same period of 1979.

Weather

UK TODAY

CLOUDY, outbreaks of rain, with bright intervals and showers later in the North; dry, sunny intervals and rain later in the South. Temperatures near normal.

London, most of England, Channel

Dry, sunny intervals, rain later. Max. 19-20C (66-68F).

S.W. and N.W. England, Lakes, Wales, most of Scotland

Cloudy, rain, hill and coastal fog, brighter later. Max. 16-17C (61-63F).

Argyll, N.W. Scotland, Orkney, Shetland, N. Ireland

Cloudy, rain, brighter with showers later. Max. 14-15C (57-59F).

Outlook: Sunny intervals, rain. Temps. near normal.

WORLDWIDE

		Y'day midday °C	°F			Y'day midday °C	°F
Ajaccio	S	24	75	L. Plms.	S	28	82
Algiers	S	28	82	Lisbon	F	29	84
Amsdm.	C	18	64	Locarno	S	21	70
Athens	F	28	82	London	C	18	64
Barcina.	S	27	81	Luxmbg.	C	15	59
Beirut	F	28	82	Luxor	S	36	96
Belfast	R	15	59	Madrid	S	30	86
Belgrd.	S	22	72	Majorca	S	27	81
Berlin	F	16	61	Malaga	F	27	81
Biarritz	S	22	72	Malta	C	26	79
Bmghm.	C	19	66	M'chstr	R	18	61
Blackpl.	C	17	63	Milan	S	24	75
Bordx.	C	18	61	Mntreal.	S	10	50
Boulgn.	C	18	61	Moscow	F	17	63
Bristol	C	20	68	Munich	S	18	64
Brussels	F	18	64	Nairobi	F	23	73
Budpst.	C	18	66	Naples	S	27	81
Cairo	S	29	84	Nwcstl.	C	14	57
Cardiff	R	18	66	Nice	F	23	73
Cas'b'ca	S	28	82	Nicosia	S	26	79
Cape T.	S	18	64	Oporto	F	27	81
Cologne	C	16	61	Oslo	S	17	63
Cpnhgn.	F	15	59	Paris	S	21	70
Corfu	S	31	88	Perth	C	17	63
Dublin	C	19	66	Prague	R	9	48
Dbrvnk.	S	25	77	Reykjvk.	S	9	48
Ednbgh.	R	15	59	Rhodes	S	28	82
Faro	F	28	82	Rome	S	27	81
Florence	S	26	79	Salzbrg.	F	18	66
Frankft.	F	18	64	Stckhm.	C	15	59
Funchal	S	26	79	Strasbg.	F	20	66
Geneva	S	19	66	Sydney	S	20	68
Gibrltr.	C	25	77	Tangier	F	30	86
Glasgow	R	14	57	Tel Aviv	S	27	81
G'nsey	C	15	59	Tenerife	S	28	82
Helsinki	C	13	55	Tunis	S	28	82
Innsbrk.	S	20	68	Valencia	F	28	82
Invrnes.	R	14	57	Venice	C	22	72
I.o.Man	R	15	59	Vienna	C	19	66
Istanbul	S	22	72	Warsaw	C	13	55
Jersey	R	17	63	Zurich	S	19	66
Jo'burg	S	17	63				

C—Cloudy. F—Fair. Fg—Fog. R—Rain. S—Sunny. Sl—Sleet. Sn—Snow.

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